NOVEMBER 9, 2015

TIME

THE WAR ON DELICIOUS

By Jeffrey Kluger

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TIME
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Cover Story

Hold the Bacon

According to the World Health Organization, red and processed meat causes cancer. Now what, America?

By Jeffrey Kluger 30

Hot dogs are now considered carcinogenic

The Forgotten War

As a U.S.-backed, Saudi-led coalition battles Shi'ite rebels in Yemen, the country's civilians face untold suffering.

By Dan Stewart/ Photos by Maria Turchenkova 38

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Like email before it, Slack, the interoffice chat program, is changing more than the way we work. It's changing who we are.

By Samuel P. Jacobs 44

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HOT DOGS: MARTIN PARR—MAGNUM PHOTOS; BARRYMORE: RW/MEDIAPUNCH/AP

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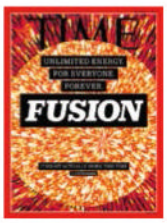

What you said about ...

THE FUTURE OF FUSION Readers praised the accessibility of Lev Grossman's Nov. 2 cover story on new efforts by private start-ups to develop fusion, a long-sought clean-energy source. It was, wrote Leslie Fyans Jr. of Springfield, Ill., a "paradigm-shifting article" about the technology. Still, the cost involved led David James of Pocahontas, Ark., to ask why fusion is worth pursuing when we have solar power, an "already perfect solution to our energy problems." And Stephen Weiss of Lewisville, Texas, cautioned that fusion's boosters should be mindful of the past. The environmental problems with nuclear energy took years to be seen, so this new technology may also have "future implications," as he put it.

> 'Fusion energy is already available ... and will be around for at least 500 million more years. Our sun.'
>
> **FRED PREVIC**, San Antonio

BRAIN STRAIN Joel Stein's Oct. 26 column, which recounted his discovery of his own biases when he underwent a brain scan to determine his empathy toward those of different faiths, left some readers disappointed. The scientist scanning his brain, Stein wrote, "refused to rank the religions in the order of my hatred, though we both knew Christians would be at the top." Dalena Jeffries of Indianapolis, a self-described Joel Stein fan, found his word choice disturbing. "It just struck me that if you replaced the word *Christians* with any other group in these sentences, there would be a public outrage," she wrote. "I realize that Stein was trying to be funny," said Peg Wentz of Rochester, Minn., but in this case his efforts "failed miserably and in fact were quite offensive."

> 'What could have been a humorous take on people's inherent biases was turned into a gratuitous denigration.'
>
> **MICHAEL REILLY**, Merrick, N.Y.

HEALTHY OPTIONS This week's cover story is all about foods to avoid eating—so for better options (such as those below), see our list of the 50 healthiest foods of all time, at time.com/50foods. And stay tuned for the next installment of 50 more, coming later this month.

1. Sardines are high in omega-3s. **2.** Almonds help maintain healthy cholesterol levels. **3.** Kale is rich in vitamins. **4.** Eggs are a good source of protein. **5.** Avocados are full of healthy fat. **6.** Bananas are a natural source of fiber and potassium.

BONUS *TIME*

Subscribe to The Brief for free and get a **daily email with the 12 stories you need to know to start your morning.** For more, visit time.com/email.

LIGHTBOX Amid societal pressures to get married or take jobs as domestic workers, a group of girls in Bangladesh—including Johanara, above—has banded together to join a surf club, where they learn English skills (from their instructor's wife) and develop their confidence. See more at lightbox.time.com.

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‘I’ve lost more sleep than all of you put together.’

HILLARY CLINTON, Democratic presidential candidate, defending herself against Republican critics during an 11-hour congressional hearing into the deadly 2012 attack on the American consulate in Benghazi, Libya

Jimmy Morales
The former comedian was elected President of Guatemala

GOOD WEEK
BAD WEEK

Jimmy Fallon
The late-night host tripped and injured a hand for the second time this year

‘LET’S NOT FORGET THAT HE’S ACTUALLY A MISOGYNIST.’

DANIEL CRAIG, actor, saying the James Bond character he has played four times should not be a role model for men; *Spectre,* the latest installment in the Bond franchise, will be released in the U.S. on Nov. 6

50

Pounds of marijuana that were mailed to a home in New Jersey (23 kg), addressed to someone who doesn’t live there; local police encouraged anyone “expecting these packages” to claim them at police headquarters

2,000

Number of sheep that were guided through the streets of Madrid by shepherds to defend age-old Spanish grazing rights

‘HOW AM I LOSING TO THESE PEOPLE?’

LINDSEY GRAHAM, South Carolina Senator and Republican presidential candidate, expressing disbelief that he is trailing political neophytes Donald Trump and Ben Carson; Graham’s poll numbers were too low to qualify for the main Oct. 28 GOP debate

‘Learning is about so much more than just filling in the right bubble.’

PRESIDENT OBAMA, calling for a cap on time spent on standardized testing in U.S. classrooms “to make sure that we’re not obsessing about testing”

295

Number of black bears killed in Florida as part of a sanctioned effort to reduce the size of the bear population in the state

‘This isn’t in the hands of man. It’s in the hands of nature.’

LUIS FELIPE PUENTE, director of Mexico’s civil protection agency, expressing relief that Hurricane Patricia, the strongest hurricane on record ever to hit the western hemisphere, inflicted far less damage to the country than had been expected

GETTY IMAGES (5); ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

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The Brief

'THE E.U. HAS ENDURED CHALLENGES IN THE PAST—BUT NOTHING AS SERIOUS AS THIS.' —PAGE 10

FBI Director James Comey said police have told him they feel "under siege"

CRIMINAL JUSTICE

Is the Ferguson effect for real? Obama and the FBI director square off

By Alex Altman

FBI DIRECTOR JAMES COMEY IS known for speaking his mind. The Republican once put his senior Justice Department job on the line by challenging President George W. Bush's warrantless-wiretapping program. But it was still striking to see him suggest a link between the violent-crime spike in some U.S. cities and the heightened scrutiny of police in recent months. "I do have a strong sense that some part of the explanation is a chill wind blowing through American law enforcement over the last year," Comey said during a speech at the University of Chicago Law School on Oct. 23. "And that wind is surely changing behavior."

Comey was channeling a theory popular among police officials, beat cops and even big-city mayors like Chicago Democrat Rahm Emanuel who believe the backlash against police brutality, coupled with the ubiquity of smartphone cameras brandished by mistrustful bystanders, has made officers leery of interceding in situations apt to wind up on YouTube. "Officers are extremely cautious right now," says Sergeant Delroy Burton, chairman of the police union in Washington, D.C., where homicides are up 45% in 2015. "Nobody wants to become the next guy in a viral video on the 6 o'clock news."

This phenomenon has been dubbed the Ferguson effect, after the St. Louis suburb where protests raged when a white police officer shot and killed an unarmed black man in August 2014. The idea isn't new. For years, law-enforcement officials have pointed to sporadic bouts of "depolicing," a related contagion that causes

AP

PHOTOGRAPH BY JOHN MINCHILLO

a slowdown in proactive beat work in the face of public recriminations of cops or dwindling department morale. After the 2001 Cincinnati riots, officers avoided confrontations, and homicides climbed. The 2014 murder of two Brooklyn beat cops prompted a temporary dip in arrests and rise in crime as officers publicly seethed over Mayor Bill de Blasio's embrace of the Black Lives Matter movement. "Officers backed off, and shootings went up," says Heather Mac Donald, a conservative scholar at the Manhattan Institute. "The depolicing phenomenon is very real."

Not everyone thinks so. Among the skeptics is President Obama, who has made criminal-justice reform a goal of his final months in office and has been waging that crusade more in public than in Congress. On Oct. 27, the President told a conference of police chiefs in Chicago that despite spasms of gun violence in cities like his hometown, violent crime nationwide is up just slightly from recent years and remains near 50-year lows. Obama disputed the idea that the difficulty of patrolling communities where officers face rampant distrust had driven police forces into a defensive crouch. "What we can't do," Obama said, "is cherry-pick data or use anecdotal evidence."

Comey acknowledged that the Ferguson effect is just a theory. But his remarks rankled some officers, who perceived the suggestion that they might shrink from duty as an unintended slight. Police are aware that any encounter gone awry can get splashed across social media, says Ronal Serpas, a former police chief in Nashville and New Orleans, "but it's not going to cause them to suddenly become less professional."

Some recent studies suggest that technology makes the relationship between police and communities better, not worse. When the entire force in Rialto, Calif., began donning body-worn cameras in 2012, complaints against cops plunged; use-of-force cases fell 60%. Researchers at the University of South Florida studied the Orlando police department's use of body cameras in 2014 and '15; in findings published in October, they concluded that cameras produced better behavior and happier communities. By the end of the experiment, many officers who had been skeptical about the utility of body cameras became believers.

Comey's comments partly reflect the frustration of a proud community that feels scapegoated and distrusted. Even law-enforcement officials who call for more accountability say the transition will be tough for a profession in flux. "Five years or 10 years from now, every cop in America is going to have a body-worn camera," says Jim Bueermann, chairman of the nonpartisan Police Foundation and a retired police chief from Redlands, Calif. "But along the way, the road is going to be very bumpy." □

TRENDING

BORDERS
A U.S. Navy vessel sailed within 12 miles of artificial islands in the South China Sea on Oct. 27 in a seemingly **direct challenge to Beijing's territorial claims on the region.** China condemned the move and summoned U.S. Ambassador Max Baucus to Beijing to explain.

SPORTS
The American Academy of Pediatrics released recommendations on **the safety of tackling in youth football,** shying away from a ban on the practice but urging coaches to train players to tackle with the shoulder and not the head and enforce zero tolerance for head-first hits.

CURRENCY
Ireland dropped 1- and 2-cent coins from circulation on Oct. 28, with retailers **rounding to the nearest 5 cents.** Ireland is the seventh E.U. country to try to phase out small units of change. Charities campaigned against scrapping small coins, saying it would hit donations.

ROUNDUP

Clowns turned politicians

Satirist Jimmy Morales was elected President of Guatemala on Oct. 25 on an anticorruption platform, despite having no experience in politics. He's far from the first joker to actually get ahead in government. —*Naina Bajekal*

JACOB HAUGAARD, a TV comedian, was elected to Denmark's parliament in 1994 promising better weather, shorter lines in stores and Nutella added to military rations—which it was.

BEPPE GRILLO founded the Five Star Movement, which became Italy's second biggest party in 2013. Still feisty, the comedian was sentenced to jail in September for slandering a professor.

JON GNARR was elected mayor of Reykjavík, Iceland, in 2010 after launching a political party as a joke on his TV show. Among his campaign pledges was free towels at all public swimming pools.

AL FRANKEN was a familiar face on *Saturday Night Live* from 1975 to 1995. But since being elected as a Democratic Senator from Minnesota in 2009, he has taken pains to avoid being funny.

BHAGWANT MANN, a famed anti-Establishment comedian, was elected to India's Parliament in 2014 after parodying future Prime Minister Narendra Modi on the campaign trail.

DIGITS

165–170°F

The heat index, which combines heat and humidity, forecast for parts of the Persian Gulf by 2100 if carbon dioxide emissions continue to grow at the current rate

SHOCK WAVE An injured woman in Peshawar, Pakistan, is rushed to a hospital on Oct. 26 following a 7.5-magnitude earthquake centered in northern Afghanistan's Hindu Kush. The quake, which could be felt 658 miles (1,060 km) away in New Delhi, killed at least 340 people across South Asia. The number of fatalities is expected to rise as rescue workers reach remote areas. *Photograph by Mohammad Sajjad—AP*

SPOTLIGHT

The challenges facing Argentina's next President

FOR 12 YEARS A KIRCHNER HAS LED ARGENTINA: First Nestor, and since his 2007 death, his widow Cristina Fernández de Kirchner. But on Oct. 25 voters went to the polls and set the stage for the country's first ever runoff election, on Nov. 22, for a President with a new name. The victor will have his work cut out for him:

A SPLIT ELECTORATE Mauricio Macri, the reformist center-right mayor of Buenos Aires, forced former Vice President Daniel Scioli—Kirchner's chosen successor—into a surprise second round. With a mere 2.6-point margin between the pair, the winner will lead a nation deeply divided between a desire for continuity and a wish for political overhaul.

SPENDING REFORMS Argentina poured money into health care, education and welfare under the Kirchners, growing the middle class but causing the country's fiscal deficit to swell. The business-friendly Macri has pledged to rein in state spending "abuses," and although Scioli says he will protect the welfare system, he acknowledges that "gradual" reforms are necessary. But either candidate will find it hard to get cuts past a Congress still largely controlled by Kirchner's party.

MONEY TROUBLES Along with the deficit, Argentina has an inflation rate of over 25%, shrinking foreign reserves and a $100 billion debt dispute with the U.S., which prevents it from borrowing more money abroad. The IMF predicts that the nation's economy will shrink 0.7% in 2016, meaning that whoever wins may be inheriting a poisoned chalice. —N.B.

‹Macri, right, and Scioli will face off Nov. 22

DISPUTES, SCIOLI: REUTERS; SPORTS, CURRENCY, HAUGAARD, GRILLO, GNARR, FRANKEN, MANN: GETTY IMAGES; MACRI: AP; ILLUSTRATIONS BY CARRIE GEE FOR TIME

DATA

WHERE THE GOOD JOBS ARE

A new Gallup report finds that 26% of the global workforce has a "good job," defined as a weekly paycheck for at least 30 hours' work. These are the shares of good jobs in a sampling of countries:

58%
United Arab Emirates

47%
Russia

44%
U.S.

35%
Germany

28%
China

5%
Burkina Faso

TRENDING

SECURITY
The Department of Justice said Oct. 27 that it would investigate the **violent arrest of a student in South Carolina by a high school resource officer** as a possible civil rights violation. The incident, caught on video by other students, led to the officer's firing.

FAITH
Roman Catholic bishops **softened the Vatican's position on divorce** at a family summit on Oct. 24, allowing divorced people the chance to return to the church on a "case-by-case" basis. The synod did not alter the church's opposition to same-sex marriage.

SPACE
A comet that passed through our solar system this year was **shown to contain alcohol and sugar,** making it the first with those organic molecules. The so-called happy-hour comet won't be a regular, however; researchers say it won't return for 8,000 years.

THE RISK REPORT

The E.U. is challenged from within

By Ian Bremmer

THE POLITICAL FORMULA FOR RILING UP citizens of E.U. countries against the idea of European government is simple. Begin with the unpopular power of faraway institutions to regulate life at home. Add a financial crisis and economic slowdown and tell your taxpayers that their hard-earned euros will be used to bail out other countries. Throw in hundreds of thousands of Middle Eastern refugees and the demands of other countries that you welcome "your share" of them. Then watch the votes come in.

That's how a far-right Euroskeptic party just won power in Poland, while the Dutch Freedom Party, Italy's Northern League and the Sweden Democrats have all capitalized on local anger at Brussels. In Greece, the Syriza Party found success with promises to force Europe to ease demands for austerity. Portugal is in political crisis after the country's President denied a Euroskeptic alliance of left-wing parties the chance to form a government after elections earlier in October.

But the real contest will be in Europe's three biggest countries: the U.K., France and Germany. The British already keep Europe at arm's length by opting out of the euro and the Schengen Agreement, which allows visa-free movement across European borders. Prime Minister David Cameron has promised Britons a referendum on membership in the E.U. itself. Most polls suggest that Britain will likely remain in Europe, but the numbers are narrowing, and antipathy toward refugees means the vote may be closer than Cameron, who is for continued membership, would like.

In France, opinion polls show that the far-right National Front, led by self-styled "Madame Frexit" Marine Le Pen, is now more popular than the center-right Republicans or ruling Socialists. There's plenty of time before the 2017 presidential election, but Le Pen is setting France's political agenda, and the refugee crisis plays to her strengths—French unemployed may compare their benefits with those afforded Muslim refugees.

> The real contest will be in Europe's three biggest countries: the U.K., France and Germany

Then there's Germany, Europe's reluctant leader. Chancellor Angela Merkel is the most resilient European politician in a generation. But her approach to the migrant crisis has eroded her approval ratings to their lowest point in four years. Germany once expected to welcome 800,000 migrants in 2015. That number could swell to 1.5 million, and just 1 in 3 Germans now supports Merkel's open-door approach.

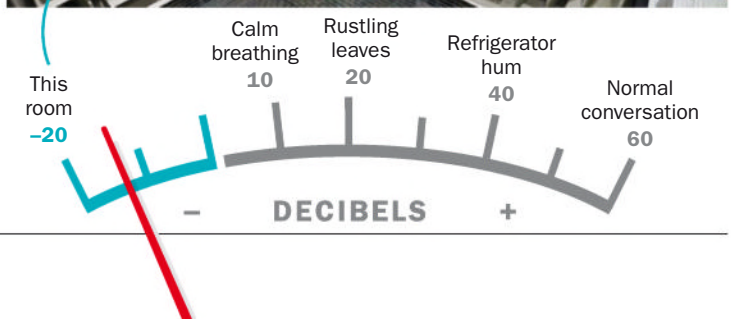
In Sweden, two asylum seekers were arrested this year for killing a mother and son shopping at an Ikea store (charges against one were dropped). What might a single tragedy like that in Germany do to Merkel's popularity? And what could political turmoil in Germany mean for Europe at a time of so much uncertainty? The E.U. has endured challenges in the past—but nothing as serious as this. ☐

BY THE NUMBERS

The world's quietest place

An anechoic chamber in Microsoft's Redmond, Wash., audio lab recently set a Guinness World Record as the quietest place on earth. Inside, the sound level is **–20 decibels,** just shy of the lowest possible figure (–23 decibels). Here's how that compares to some common sounds.

—Sarah Begley



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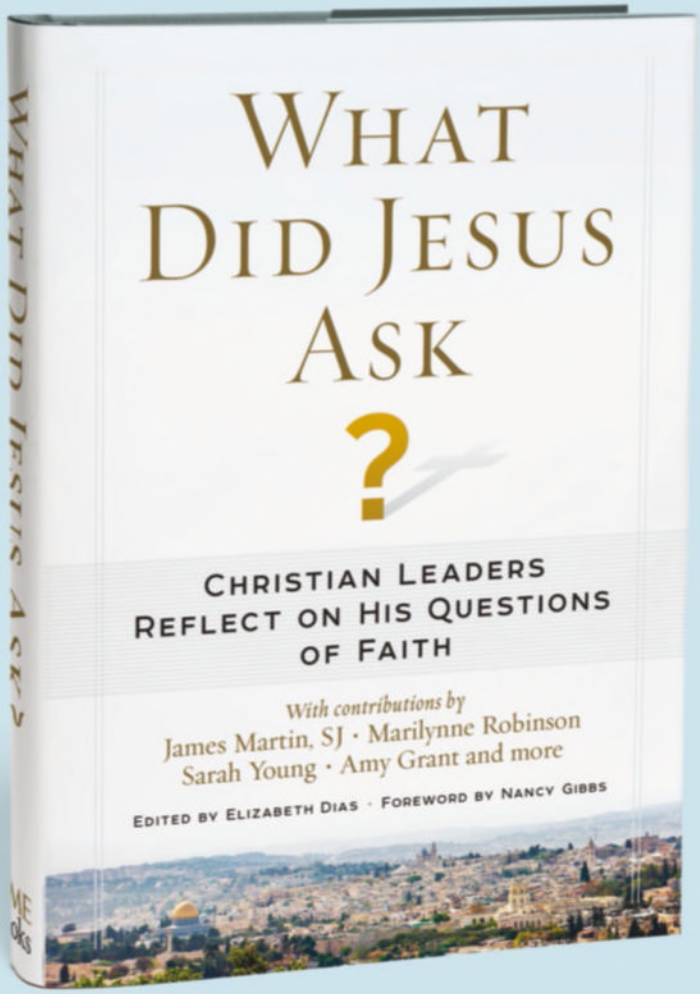
How Would You Answer?

Some of Jesus' most provocative questions find new life and meaning



In *What Did Jesus Ask?*, over 70 of today's most prominent spiritual writers, religious influencers and artists offer modern meditations on many of the questions posed by Jesus in the Bible.

Contributors include:

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Roma Downey · Michael W. Smith
Sarah Young · Barbara Brown Taylor
Richard Rodriguez · and many more

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Milestones

ANNOUNCED
Her retirement, by soccer star **Abby Wambach.** The sport's leading all-time international scorer among both men and women will play her final game with the U.S. women's team on Dec. 16 in New Orleans against China.

REMOVED
The **Mississippi state flag,** from the campus at **Ole Miss.** Students, faculty and staff at the state university had pushed for its removal because of the prominent Confederate battle flag in its design.

DIED
Flip Saunders, 60, head coach and president of basketball operations for the Minnesota Timberwolves. He coached the team from 1995 to 2005 and returned as head coach in 2014, a year after becoming president.

BANNED
By the Department of Transportation, the packing of **e-cigarettes in checked luggage** on airline flights. "We know from recent incidents that e-cigarettes in checked bags can catch fire during transport," said Secretary Anthony Foxx.

O'Hara, who starred in films like The Quiet Man *and* Miracle on 34th Street, *died Oct. 24 at 95*

DIED

Maureen O'Hara
A Hollywood classic

By Chris Columbus

LAST YEAR, A REPORTER ASKED MAUREEN O'Hara to name her most marked characteristic. "The hell and fire in me," she replied. "They came as a set."

Maureen was arguably the strongest and toughest female performer to ever appear on-screen. Her characters embodied power and intelligence, in an era when it wasn't always fashionable.

In 1990, at age 70, Maureen came out of retirement to play Rose Muldoon in *Only the Lonely,* a role I had written specifically for her. She hadn't worked in 17 years. The studio was concerned that Maureen couldn't keep up with our pace or grueling hours. But she was always at the top of her game. There were many late nights when you'd find Maureen improvising scenes with John Candy past 4 a.m.

Maureen O'Hara still had the hell and fire in her.

Columbus is an Academy Award–nominated filmmaker and best-selling author

MILITARY

A resurgent Russia is active in Syria and beyond

By Mark Thompson

THE RUSSIAN THREE-STAR GENERAL arrived at the door of the U.S. Embassy in Baghdad on Sept. 30 with a stern warning: Moscow would be launching warplanes to attack targets in Syria in an hour—stay away. In response, the U.S. directed its own aircraft, which have been bombing ISIS targets inside Syria since September 2014, to steer clear of the Russian jets. With the skies wide open, Moscow's air force has been focusing most of its firepower not on ISIS but on the CIA-backed rebels trying to topple Syrian President Bashar Assad, a longtime Russian ally—and someone President Obama has repeatedly insisted must relinquish power to end the Syrian civil war.

> 'I don't see an overreaching or overriding strategy on the part of the United States.'
>
> ROBERT GATES, Obama's first Defense Secretary

The U.S. taking orders from Russia? "I can't recall anything like it," says retired Army general Jack Keane.

It's a new world—albeit one with a Cold War ring. Beginning in March 2014 with his seizure of Crimea from Ukraine, Russian President Vladimir Putin has been deftly moving his military forces around the global chessboard, raising alarms inside the Pentagon. After taking the Crimean Peninsula, he reinforced Russian-speaking separatists' hold on eastern Ukraine, undaunted by clear evidence that those forces used Russian hardware to down a Malaysia Airlines jet in July 2014, killing all 298 people aboard. In September, Putin dispatched warplanes and arms to Syria, attacking Assad's foes not only from the sky but also with cruise missiles launched from Russian naval vessels 900 miles away in the Caspian Sea.

The same month, Putin struck an accord to share intelligence on ISIS with

GETTY IMAGES

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AMERICAN CRUISE LINES

Russian ground staff members load a Sukhoi Su-30 fighter jet at a base near Latakia, Syria

Iran, Iraq and Syria, but not the U.S. Putin is peddling arms to Egypt, Kuwait, Saudi Arabia and the United Arab Emirates. Afghanistan is seeking Russian artillery and helicopter gunships, even as Obama recently decided to slow the withdrawal of the 9,800 U.S. troops still in the country. Putin's navy has been poking around undersea Internet cables, raising concerns that the Russians might one day cut them amid heightened global tensions, derailing $10 trillion in daily commerce and possibly affecting U.S. military communications.

But Kremlinologists are most worried about the Middle East. Syria represents Moscow's first military campaign outside Soviet borders in nearly 30 years. As the U.S. seems to be withdrawing from the Middle East, Russia is taking its place. "For nearly seven years, the Administration has tried to extract America from the Middle East," Republican Senator John McCain of Arizona, chairman of the Armed Services Committee, scolded Defense Secretary Ashton Carter on Oct. 27. That has created a vacuum into which, McCain noted, "has stepped Vladimir Putin."

RUSSIA'S CAMPAIGN

Putin is flexing his muscles in Syria at a time when the U.S. is pulling back in the Middle East

$4 million
Estimated cost per day of Russia's campaign in Syria

$51 billion
Russian military budget, which has continued to grow as other parts of the budget have shrunk

89.9%
Putin's approval ratings, an all-time high, according to the state-backed pollster VTsIOM

Americans are weary of war, and Moscow is taking advantage of the sentiment, probing for soft spots where there is little chance of U.S. retaliation. These relatively modest incursions—no big ground forces are involved—pack a disproportionate punch on the world stage. They loom especially large given the U.S. failure to train anti-ISIS Syrian rebels and its inaction after Assad crossed the "red line" laid down by Obama by using chemical weapons against his own citizens.

While Putin has doubled spending on his armed forces since 2005, the U.S. still spends 10 times as much and sails 10 aircraft carriers to Moscow's one. But Russia has shown it can field a good ground-based fighting force with improving air and naval assets. Putin's ego and unpredictability, combined with his nation's weakening economy and atomic arsenal, make Russia the most volatile near-term threat to the U.S.—unlike China, whose projected future growth allows it to take a more confident long view. "President Putin is a man in a hurry," U.S. foreign policy expert Walter Russell Mead of the Hudson Institute warned a Senate panel on Oct. 22. "It's

RUSSIA: RUSSIAN DEFENSE MINISTRY PRESS SERVICE/REUTERS; RYAN: AP

not that you ignore [Putin] or cast him off as a megalomaniac," Prince Turki al-Faisal, Saudi Arabia's former ambassador to the U.S., told a Washington audience on Oct. 23. "He has a vision of the world and a strategy to put that vision in place."

That's in stark contrast to Obama, who, according to critics, tends to react to events overseas rather than shaping them by seizing the initiative. "I don't see an overreaching or overriding strategy on the part of the United States," Robert Gates, Obama's first Defense Secretary, recently told Congress. "We're thinking strictly in sort of month-to-month terms."

Pentagon officials fear that Russia is creating a third defensive "bubble" in Syria, like the zones it already has near the Baltics and over the Black Sea. These "anti-access/area denial" zones in what Russia calls its "near abroad" usually consist of missile systems designed to keep potential foes away. It's a tactic increasingly used by nations like China interested in keeping the U.S. military at bay but unable to match it plane for plane or ship for ship. Think of it as a 21st century moat.

It's important to keep Moscow's moves in perspective. Its Syrian venture is as much a reflection of Assad's weak hold on power as Moscow's regional strength. The Syrian city of Tartus hosts the Russian navy's lone Mediterranean base—losing control of it would make it difficult for Russia to sustain its presence there. And Islamic extremism is a bigger concern for Moscow, which has seen some 2,500 of its citizens join ISIS, than it is for Washington. "Mr. Putin had to go into Syria not out of strength but out of weakness, because his client, Mr. Assad, was crumbling," Obama said in October.

Frustrated over the stalemate with ISIS, Obama is weighing a Pentagon recommendation that would put U.S. troops inside Syria and closer to the front lines in Iraq. Retired Army general Keane believes the U.S. should have "been given the mission to retaliate" against Russia's move when it happened. Options would have included bombing Syrian runways, wiping out Assad's helicopter fleet—and warning Russia to steer clear of U.S. warplanes, instead of the other way around. That, of course, would be a roll of the dice that could lead to another, far bloodier war. Most Americans, and their President, show no desire to make that bet. ◻

SPOTLIGHT

Paul Ryan's new Republican playbook

HOUSE SPEAKER JOHN BOEHNER FOUND HIMSELF BOXED INTO YET another corner just days after announcing plans to step down. His chosen successor, majority leader Kevin McCarthy, had been denied the top job by the same conservative rebellion that had bedeviled Boehner. As chaos loomed, he turned to Ways and Means chairman Paul Ryan of Wisconsin. But Ryan didn't want the job. So Boehner, a fellow Catholic, brought in the big guns, enlisting party elders, donors and even Timothy Dolan, the New York Cardinal, who'd previously served in Milwaukee, where he'd grown close to Ryan. Maybe the Catholic guilt helped. But before agreeing to take the job, Ryan made clear that he would do it in his own way:

FOCUSING ON BIGGER ISSUES

Ryan wants to be relieved of many of the duties that consumed previous Speakers, everything from fundraising to committee organization to day-to-day management. Instead he'd like to focus on the big picture, taking the GOP "from being an opposition party to being a proposition party," as he puts it. Boehner offered to help, by forcing through a bill in his final days that will forestall a major budget and credit showdown until after the 2016 election. That will allow Ryan to focus on new legislative ideas on everything from poverty reduction to tax reform.

AVOIDING TOP-DOWN LEGISLATION

Ryan promises that he won't be dictating upcoming legislation as Boehner often did. He'll be asking committees to come up with it themselves. Then it will go through the long-neglected process of hearings, markups and amendments. Many of the conservatives' complaints derive from the fact that the House is governed in top-down fashion, and they want more input.

EMBRACING COMPROMISE

In 2008, as ranking member of the House Budget Committee, Ryan introduced his Roadmap for America's Future Act. It garnered only eight co-sponsors and never made it out of committee, but it did make him the hero of the forming Tea Party. Ryan always said it was the first offer in what he considered a long negotiation on the country's financial future. And sure enough, it eventually led him to a compromise two-year budget in 2013 that he worked out with Senate Democrats, who still praise Ryan for the effort. Boehner has high hopes that Ryan will be able to cut more deals without losing the faith of conservative hard-liners. "Listen, Paul knows how to do this," he told reporters on Oct. 27. "He knows the players, and he has the respect of the players that make these decisions. So I don't think he'll have any problem at all."

—JAY NEWTON-SMALL

Ryan envisions a different kind of speakership ›

LightBox

On the beaten track

Migrants walk through fields in Rigonce, Slovenia, on Oct. 25 after crossing the border from Croatia. Since Hungary closed its border with Croatia on Oct. 16, more than 80,000 migrants have entered Slovenia, seeking passage to northern Europe before winter arrives.

Photograph by Darko Bandic—AP

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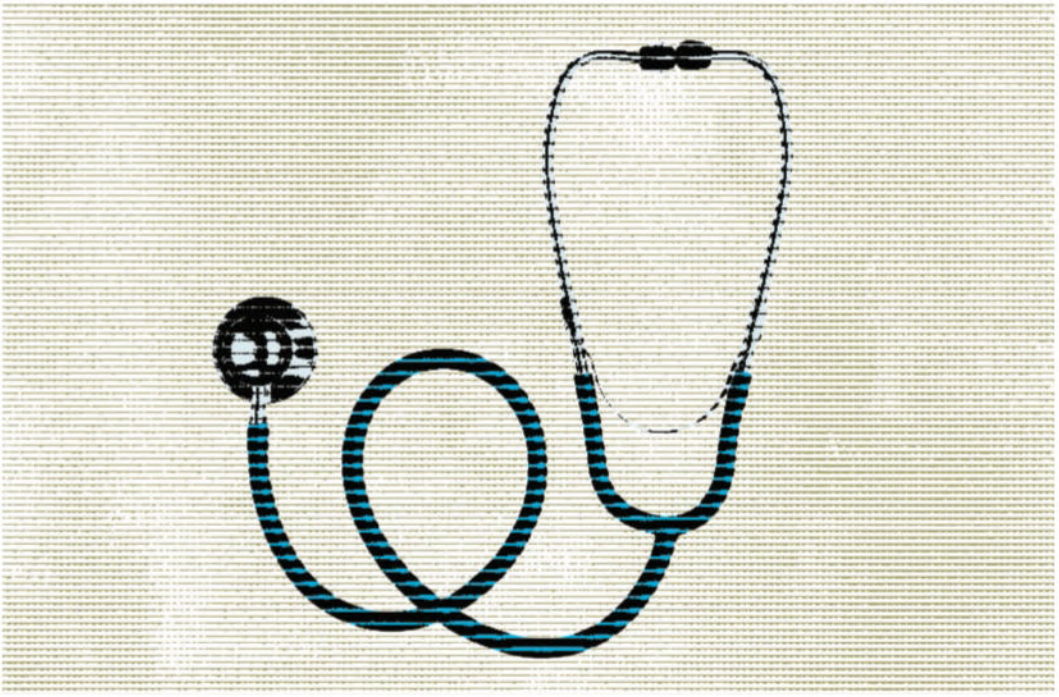
The View

'I HAVE HOPE THAT OUR GENERATION CAN CHANGE THE WAYS THINGS ARE DONE.' —PAGE 22



As more people try cybermedicine, seeing a doctor from your couch is fast becoming mainstream

GETTY IMAGES

HEALTH

Why (almost) everyone is embracing the digital doctor

By Alexandra Sifferlin

LIKE MANY AMERICANS HER AGE, Gillian Roach, 27, doesn't have a primary-care doctor. So when she woke up on a recent morning with a bad cough, Roach, who has asthma, logged on to Maven, an app that connects women to a variety of health providers over video chat. Soon Roach was talking with a female nurse practitioner, who listened to her cough, offered advice and sent an inhaler prescription to Roach's local CVS in Arlington, Va. The entire session lasted 10 minutes and cost Roach $18, just under half her usual co-pay.

"From booking the appointment to having an inhaler in my hand was 2½ hours," Roach says. "The whole time, I was sitting on my couch and the doctor was sitting on her couch."

That relative ease and value are turning cybermedicine from a controversial practice into an increasingly mainstream health care option. Maven, which launched in April, is one of several new digital platforms that let patients video-chat with doctors and get common prescriptions at any hour of the day, seven days a week. Major hospitals such as Cleveland Clinic and Stanford Health Care now offer virtual appointments for simple cases. And this year UnitedHealthcare, the nation's largest health insurer, began covering digital consultations. By 2019 there will be an estimated 124 million doctor-patient video consultations in the U.S., up from close to 7.2 million in 2015.

"Over time most physical office visits will not occur," says Dr. Eric Topol, director of the Scripps

PHOTO-ILLUSTRATION BY LON TWEETEN FOR TIME

Translational Science Institute. "Routine things will be much more efficiently accomplished through mobile devices."

For patients, the appeal of this shift is clear. It takes nearly 20 days on average to get an appointment with a family physician in the U.S., and urgent-care visits average $150. Maven charges $18 for a 10-minute session, while rival Doctor on Demand charges $40 for 15 minutes—all done through an app.

Many doctors have come to embrace virtual appointments because of their own time crunches. There is also hope that cybermedicine could help fix the nation's growing shortage of primary-care physicians—the Association of American Medical Colleges estimates that we'll be short by as many as 31,000 by 2025. "In many exams, the hands-on touching doesn't have much of a role in the interaction and a video visit works perfectly well," says Dr. Peter Rasmussen, a neurosurgeon at Cleveland Clinic who uses virtual visits. "It increases my efficiency and is a lower-cost option for many patients, particularly if they have to travel to see a provider."

Plenty of medical groups remain skeptical. The American Academy of Pediatrics says cybermedicine can prevent patients from forming lasting relationships with a doctor versed in their medical history. And while there is no evidence to show that misdiagnoses are more common in cybermedicine—more research is needed—a May study found that doctors were more likely to prescribe broad-spectrum antibiotics in virtual appointments, raising concerns about drug resistance. There is also uncertainty over whether cybermedicine will expand too far beyond the easy-to-handle coughs, fevers and sore throats for which it is primarily used today.

Many startups are already moving in that direction. In August, Maven offered therapist speed dating to allow users to meet mental-health providers in 10-minute increments to find someone who clicked with them. And as wearable tech advances, virtual docs will be able to offer more-tailored care based on biomarker data uploaded by patients.

Another big reason for the shift to digital docs: money. Cybermedicine could save employers an estimated $6 billion each year, and in a recent survey of large employers, 38% said their insurance plans cover it, while 81% intend to have it covered by 2018. "That's an astounding number," says Dr. Allan Khoury, a senior consultant at Towers Watson, which conducted the survey. "We don't usually see transitions in care happen this quickly."

That's because of consumers like Roach, who has quickly become a convert. "I don't have to sit with people who are sicker than me in urgent care," she says. "I can be on my couch in my yoga pants with a blanket around me." ◻

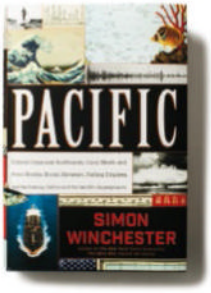
VERBATIM

'I don't think it's important at all ... They didn't get a horse to direct *Seabiscuit*.'

ANTHONY MACKIE, actor, on why he doesn't think it's necessary for a black director to helm Marvel's upcoming *Black Panther* film, which centers on an African superhero

NUTSHELL

Pacific

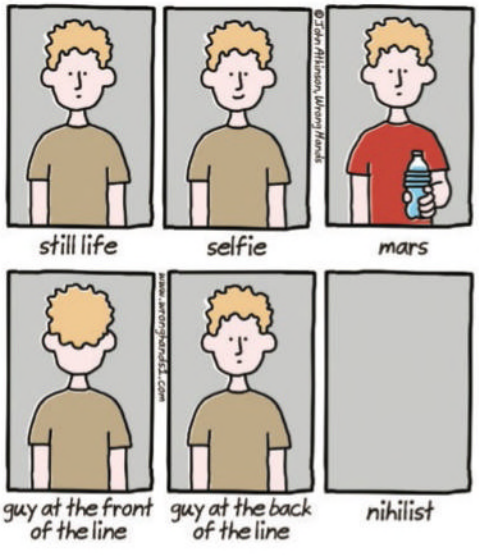


IN ANCIENT HISTORY, the locus of the world's conflicts and advancements was the Mediterranean Sea; after that, it was the Atlantic Ocean. But today, argues historian Simon Winchester in his new book, all eyes should be on the Pacific. More than any other region, he writes, its waters—which cover nearly a third of the planet's surface—will shape our future. They're home to China's rapidly expanding navy; they enable precision, long-range U.S. missile testing (rockets have been fired 4,000 miles from the West Coast to an Army base in the Marshall Islands, landing within inches of their target); and they lap at the shores of the cities (San Francisco, Tokyo) creating the most innovative technology. More pressing, however, is the fact that the Pacific—the earth's most seismically active ocean—will exert outsize influence on global weather patterns, especially amid rapid climate change.

—SARAH BEGLEY

CHARTOON

Last-minute costumes



JOHN ATKINSON, WRONG HANDS

DIGITS

100%

Estimated increase in profits and revenue growth at the payments company Gravity six months after CEO Dan Price made headlines for announcing a $70,000 minimum wage; employee retention also rose, from 91% to 95%

MACKIE: PRICE: GETTY IMAGES; CAR: LEXUS (4); ILLUSTRATION BY MARTIN GEE FOR TIME

SNAPSHOT

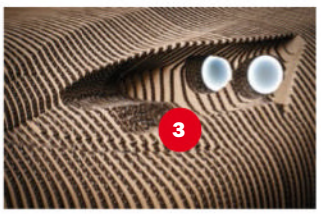
The cardboard car

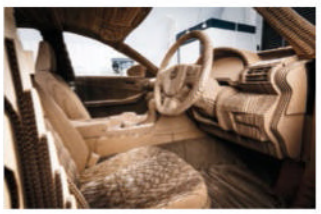
At a recent design show, Lexus debuted a working version of its IS sedan made almost entirely of cardboard. Here's how it came about. —*Julie Shapiro*

1 The U.K.-based Lasercut Works and Scales & Models spent three months constructing the one-of-a-kind Lexus, nicknamed the Origami Car.

2 They used 1,700 sheets of laser-cut cardboard, which were glued to form doors that open and wheels that turn. An electric engine makes the car go (slowly).

3 The car, which is not for sale, was commissioned as a tribute to Lexus' master craftsmen, who do extensive detailing for its commercial vehicles.





QUICK TAKE

How the government created your cell phone

By Rana Foroohar

STEVE JOBS IS JUST ONE EXAMPLE OF THE startup mythology that surrounds Silicon Valley—we credit the private sector for the innovation and growth in our economy. But University of Sussex economist Mariana Mazzucato's book *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* argues that it is the government, not venture capitalists and tech visionaries, that is the hero. "Every major technological change in recent years traces most of its funding back to the state," says Mazzucato. Even early-stage private-sector VCs come in after the big breakthroughs have been made.

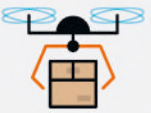
The book recounts how the parts of the smartphone that make it smart—GPS, touchscreens, the Internet—were advanced by the Defense Department. Tesla's batteries came out of a Department of Energy grant. Google's search algorithm was boosted by a National Science Foundation innovation. Many new drugs have come out of NIH research.

How much the private sector owes to government will be a hot-button issue in 2016. But Mazzucato says there's a better model: Israel and Finland retain equity in firms that come out of basic government research. And the U.S. government in the past has dictated that companies reinvest money in Main Street rather than give it to Wall Street. That's how Bell Labs was born, after the federal government pressured AT&T to reinvest profits in innovation. We got the C++ programming language and cell-phone calling technology, among many other advances, out of that. Not a bad precedent. □

SPOTLIGHT

DRONE DELIVERY

Walmart recently made waves by asking the Federal Aviation Administration for permission to test drone delivery, but it's hardly the first company to pursue the practice. Here's how others have fared:



AMAZON
The e-commerce company has openly stated that it wants to deliver your books, gadgets and household items by drone. In April it received permission to conduct outdoor tests for such a service: Prime Air.

GOOGLE
The tech titan doesn't yet have permission to test drones in the U.S., but it has done some practice runs in a partnership with NASA. It has also tried its devices in the Australian skies, delivering dog food to farmers in the outback in 2014.

DOMINO'S
As part of a 2013 marketing stunt, the pizza chain delivered two pies by drone in the U.K. (and caught the whole thing on video). But it remains unclear if it will test those methods in earnest.

DHL
The company won approval to make deliveries by drone in Germany last year, flying necessities like medicine to an island off the country's coast. —*S.B.*

TIME TEENS

The most influential teens of 2015

To assemble our third annual list, TIME editors considered accolades across numerous fields, global impact through social media and overall ability to drive news. Here, a sampling from the full group of 30 available at time.com/teens2015.

KIM KATAGUIRI, 19

The protester

When Kataguiri, a former São Paulo college student, started posting satirical YouTube videos in mid-2013, he did not expect to start a revolution. But as Brazil's economy fell into recession and its ruling Workers' Party faced a massive corruption scandal, Kataguiri's offbeat humor—in one video, he wears a ninja costume before arguing to impeach President Dilma Rousseff—became a rallying cry. "That's when I realized I could use the Internet" to effect real-world change, says Kataguiri, who quit school to co-found the Free Brazil Movement, a libertarian group that espouses free-market values. Since then, Kataguiri has helped organize many protests, including a São Paulo event in March that brought out an estimated 200,000 people, the city's biggest demonstration in three decades. "Politics in Brazil look very bad" right now, he says. "But I have hope that in 20 years things can be different. I have hope that our generation can change the ways things are done." —*Matt Sandy*

Kataguiri cites Ronald Reagan and Margaret Thatcher as inspirations

ASHIMA SHIRAISHI, 14

The climbing champ

Spain's rigorous Open Your Mind Direct rock-climbing route is considered one of the most difficult courses in the world, thwarting all but the most skilled of adult (mostly male) athletes. So when Shiraishi, at age 13, completed the challenge earlier this year—simultaneously becoming the youngest person and the first woman ever to do so—she was dubbed rock-climbing royalty, earning rave write-ups in *Outside* magazine, the *Guardian* and more. (Her reaction: a celebratory Instagram captioned "OMG!!!") They're the latest in a series of accolades for the New York City native, who started climbing in Central Park at age 7 after falling "in love with the movement," as she puts it. But Shiraishi has grander ambitions. Among them: doing more climbs that no woman has ever completed and—assuming the International Olympic Committee approves climbing as a sport, which it is expected to vote on next year—competing at the 2020 Games in Japan, where her parents were born. Her dad in particular, she says, has been very supportive. "Of course my parents get nervous—they're my parents, and they're afraid of me [getting hurt]," she says. "But I think that they're proud of me for trying to do some crazy things." —*Sarah Begley*

"It's crazy to see that I have fans because of climbing," says Shiraishi, "because I'm still 14 and I'm still learning a lot."

AHMED MOHAMED, 14

After his arrest started a debate over anti-Muslim bias (he brought a homemade clock to his Irving, Texas, school; a teacher thought it was a bomb), Barack Obama invited him to the White House. He later accepted a scholarship from a school in Qatar.

KATIE LEDECKY, 18

The D.C.-born swimmer holds three world records, prompting talk of a "next Michael Phelps" at the 2016 Olympics.

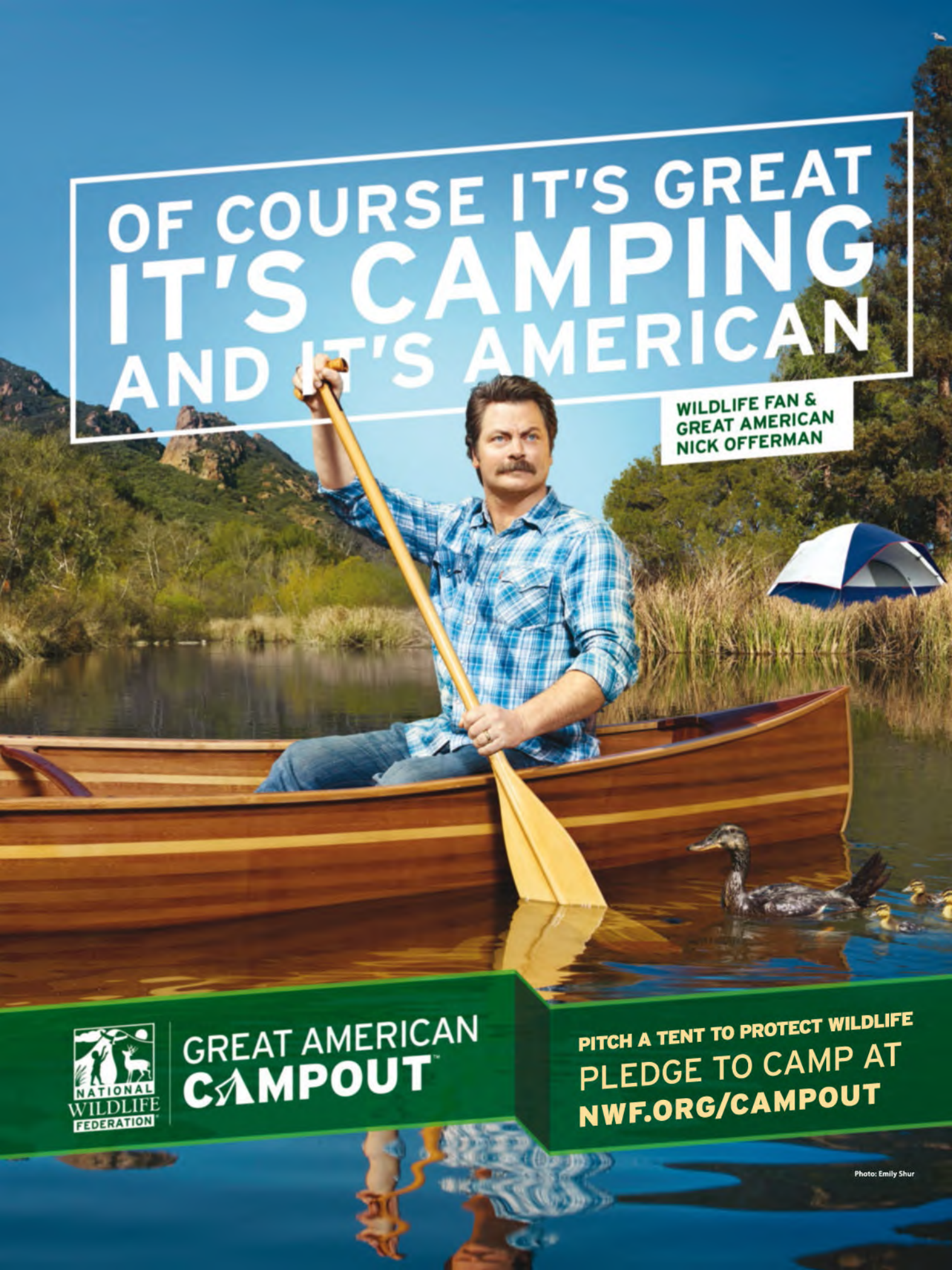
JADEN SMITH, 17

Aside from his infamous Twitter musings ("Dying Is MainStream"), Will Smith's son is making waves in music (his EP dropped in February) and radio (as a Beats 1 host).

ZENDAYA, 19

The Disney star, whose dreadlocks were mocked on E!'s *Fashion Police,* has become an advocate for natural beauty; Mattel released a Barbie in her image.

KATAGUIRI, SMITH, MOHAMED: AP; SHIRAISHI: REDUX; LEDECKY, ZENDAYA: GETTY IMAGES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IT'S CAMPING
AND IT'S AMERICAN
WILDLIFE FAN &
GREAT AMERICAN
NICK OFFERMAN
NATIONAL WILDLIFE FEDERATION
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SILENTÓ, 17

The viral phenomenon

Six months ago, barely anyone had heard of Silentó (real name: Ricky Lamar Hawk), an aspiring rapper from Stone Mountain, Ga. That all changed on June 25, 2015, when the rising high school senior dropped the video for his first single, "Watch Me (Whip/Nae Nae)"—an infectious clip centered on popular hip-hop dance moves. (He says he came up with the idea while entertaining classmates at lunch.) By mid-October, it had logged more than 300 million views, spawning countless parodies and celebrity imitations *(see below)* and eventually reaching No. 3 on the *Billboard* Hot 100. Next up for its multiplatinum singer? Attending college, where he plans to study business.

—Samantha Grossman

"Whip/Nae Nae" fans include, from left, Hillary Clinton, Jimmy Fallon, pro wrestler Jimmy Uso and a San Diego cop

OLIVIA HALLISEY, 17

The science whiz

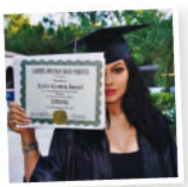
When news broke last year about West Africa's Ebola crisis, what struck Hallisey most—besides the raw tragedy of the death toll—was how hard it is to test for the disease. The standard method requires that blood samples be refrigerated as they travel to lab facilities, a huge challenge for rural regions without electricity. But what if it didn't? "It seemed like such a simple fix," says the Connecticut resident, whose late grandfather, a doctor, piqued her interest in science. Within months she had built a solution (inspired by research from scientist Fiorenzo Omenetto): a paper card containing silk film and compounds designed to visibly react with traces of the Ebola virus in human saliva, no labs or refrigeration necessary. Although it will require real-world testing before being deployed, it won top honors at September's Google Science Fair, a testament to its lifesaving potential. *—Olivia B. Waxman*

Hallisey has said she eventually wants to work for a health group like Doctors Without Borders

KYLIE JENNER, 18

The social-media star

"How do you feel now that you have dethroned me?" Kim Kardashian, the reigning queen of social and tabloid media, recently asked her half sister in a public video clip. She was talking about Jenner's life-casting app, which had overtaken a similar app from Kardashian on an iTunes popularity chart. But the sentiment belies a larger shift. In the past year or so, Jenner—who rose to fame as a shy tween on E!'s *Keeping Up With the Kardashians*—has become arguably the most watched teenager in the world, commanding an audience of 60 million across Facebook, Twitter and Instagram. "Everything I do, I always start these huge trends," she says of phenomena like the #KylieJennerLipChallenge, for which thousands of social-media users (unprompted by Jenner) tried to mimic her cosmetically enhanced lips with at-home suction tricks. But that's not the kind of influence she's aiming for. "I just want to inspire my fans to be whoever they want to be," Jenner says, "because that's what I've always done." *—Daniel D'Addario*



Jenner's most popular Instagram post has 2.3 million Likes

FLYNN MCGARRY, 16

The California native and chef in training recently opened a pop-up restaurant in New York City, where he charges $160 a head for 14-course dinners.

MALIA OBAMA, 17

The First Daughter is now a full-fledged icon, whose fashion choices (like a T-shirt for Brooklyn hip-hop group Pro Era) and college visits (most recently, to Brown University) make national headlines.

WILLIAM TURTON, 17

The writer for tech site The Daily Dot has nabbed scoops about Uber firings and a prominent hacking collective.

MALALA YOUSAFZAI, 18

The Nobel Peace Prize winner recently launched the #BooksNotBullets campaign to get politicians to redirect some military spending toward global education.

SILENTÓ, JENNER, MCGARRY, OBAMA: GETTY IMAGES; HALLISEY: GOOGLE; TURTON: WILLIAM TURTON; YOUSAFZAI: AP

VIEWPOINT

Obama may have overcorrected on the overtesting problem

By Senator Lamar Alexander

PRESIDENT BARACK OBAMA RECENTLY ANNOUNCED THAT all 100,000 public schools across the nation should limit testing to 2% of a student's time in the classroom. It's a recommendation, not a requirement, and it comes in response to a nationwide backlash from teachers, students and parents who are sick of overtesting.

The President is right about students' taking too many tests. But I hope he will stop and think before trying to cure overtesting by telling teachers exactly how much time to spend on testing or what the tests should be. Classroom teachers know better than Washington how to assess their students' progress. They also know that the real reason we have too many tests is that there are too many federal mandates that put high stakes on student test results, and that one more Washington decree—even if it is only a recommendation for now—is not the way to solve the problem of too many federal mandates.

Instead, the best way to fix overtesting is to get rid of the federal mandates that are causing the problem. That's precisely what the U.S. Senate did when it passed by an overwhelming bipartisan majority, 81-17, legislation to fix No Child Left Behind and give more flexibility to states and classroom teachers to decide which tests will determine what kind of progress students are making.

No Child Left Behind, a federal law enacted in 2001, requires students to take 17 standardized tests over the course of their K-12 education. It uses those tests to decide whether schools and teachers are succeeding or failing. In the Senate's work to fix No Child Left Behind, no issue stirred as much controversy as these high-stakes tests.

AT FIRST, I was among those who thought the way to fix overtesting might be to get rid of the 17 tests. But the more we studied the problem, the more the issue seemed not to be the 17 federal tests but the federally designed system of rewarding or punishing schools and teachers that was attached to the tests. A third-grader, for example, is required to take only one test in math and one in reading. But here is the problem: the results of these tests count so much in the federally mandated "accountability system" that states and school districts are giving students dozens of additional tests to prepare for the federal tests.

A new survey says students in big-city schools will take, on average, 112 mandatory standardized tests between prekindergarten and high school graduation—that's eight tests a year.

One Florida study showed that a Fort Myers, Fla., school district gave more than 160 tests to its students. Only 17 of those are federally required. So the U.S. Senate decided to keep the federally required 17 tests—that's two annual tests in reading and math in grades 3 through 8 and once in high school, as well as science tests given three times from grades 3 to 12. We also kept the practice of reporting results publicly so parents and teachers would know how their children are performing. These results are "disaggregated," so we know how students are doing based on their gender, ethnicity or disability.

TO DISCOURAGE OVERTESTING, we restored to states and classroom teachers the responsibility for deciding how to use these federal test scores to measure achievement. Our bill ends the high-stakes, Washington-designed, test-based accountability system that has caused the explosion of tests in our local schools. It reverses the trend toward a national school board.

I am glad to see the President's focus on overtesting. But let's not make the same mistake twice by decreeing from Washington exactly how much time to spend on tests or what the tests should be. States and 3 million teachers in 100,000 public schools are in the best position to know what to do about overtesting. Both the Senate and House of Representatives have passed similar bills to fix No Child Left Behind and to reduce the federal mandates that are the real cause of overtesting.

The best way to have fewer and better tests in America's classrooms is for Congress to finish its work and the President to sign our legislation before the end of the year. □

Alexander is chairman of the Senate education committee, a former governor of Tennessee and a former U.S. Education Secretary

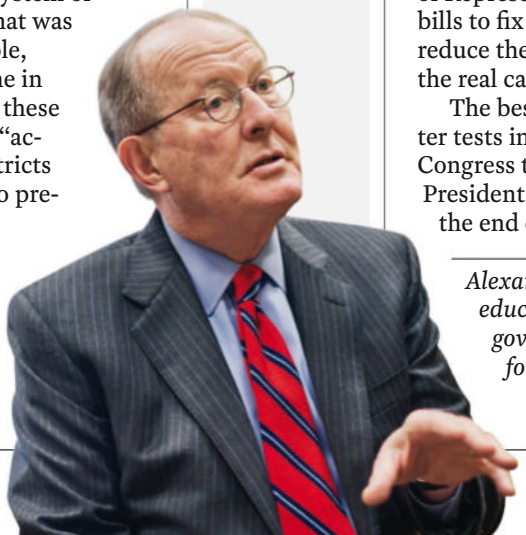
THE MATH ON TESTING

112

Number of standardized tests the average student takes from preschool to 12th grade—about eight per year—according to a recent report on testing in the country's big-city schools

'Let's not make the same mistake twice by decreeing ... how much time to spend on tests.'

SENATOR LAMAR ALEXANDER



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IN THE ARENA

A GOP identity crisis eases the path for Hillary Clinton. But she will need a backbone

By Joe Klein

IN MID-OCTOBER, THE ASTROLOGY OF THE 2016 PRESIDENTIAL campaign began to change: Clinton rising; Republicans waning. The arcs intersected at the House Special Benghazi Committee hearings, where chairman Trey Gowdy seemed a visitor from an alternate universe, a place where the musings of Sidney Blumenthal—a lesser Clinton courtier unknown to most Americans—counted for more than the existential question: Why on earth did we attack Libya in the first place?

Latter-day Republicans have a tendency to get lost finding conspiracies in their own entrails, but the Benghazi weirdness seemed truly incomprehensible—after watching for nine hours, I still have no idea what the interrogators were after. And Benghazi seemed a refraction of the increasingly bizarre Republican nomination race, in which Ben Carson seems to be levitating past Donald Trump. Indeed, I can't remember a time when I've experienced the gnashing of so many prominent Republican teeth. "Who would you vote for," a leading Republican asked me, "Trump or Bernie Sanders?" "Who would *you* vote for," I asked in return, "Trump or Hillary?"

As his campaign has progressed, Trump's position on some key issues seems to be to the left of Clinton's—on the Iraq War, especially—and in her general neighborhood on others: taxation of the rich, entitlements, universal health care. He is a nightmare of chainsaw-massacre proportions to Establishment conservatives. Their panic may be premature, though. This election reminds me of this exact moment in the 2004 Democratic nominating process when Howard Dean was a house afire and John Kerry seemed deader than Jeb Bush does now. "I'd love to see Dean get the nomination," Karl Rove, who was running George W. Bush's re-election campaign, told me in November 2003. "But he won't. Americans don't elect angry Presidents." It is a basic truth: Any candidacy based solely on adrenaline will inevitably crash. Trump should check with Dr. Carson about the chemistry, or just ask Howard Dean, who had a far more righteous cause for anger than Trump—the Iraq War—but no second act.

ALL OF WHICH makes Jeb Bush's behavior in the days before the Colorado debate seem myopic and self-destructive. Americans may not like angry candidates, but they are utterly allergic to whiners. If there are a "lot of really cool things" Bush can do instead of running for President, perhaps he should go do them. That would be a shame. Bush has emerged as the candidate for the opposite of those who are "low-information" voters—perhaps we could call them "too much information" voters. He has laid out some heavy-duty policy proposals, some with real merit, but none with the zing of a bumper sticker. He seems a thoughtful guy, but without fists or elbows. With Bush and Trump on the wane, Marco Rubio seems poised to be the flavor of the next month.

Does the Republican identity crisis mean that Hillary Clinton is our next President? She certainly looks solid—especially when she's in Benghazi mode. At one point in the hearings, her ability to put the Libya situation in context, comparing it with her near-simultaneous actions to tamp down an extremely dangerous situation in neighboring Tunisia, left any non-Hillary-hating observer thinking: This woman is cool in crisis, tough and prepared. There are no more important qualities in a President.

BUT CLINTON is not always in Benghazi mode. Her attempts to deliver hortatory political speeches, as at the Iowa Democratic Party meeting a couple of days after the hearing, still come across as harsh and unconvincing. (For those who believe this is a sexist observation, I would note that both Carly Fiorina and Elizabeth Warren really know how to give a fighting speech.) Another problem for Clinton is her failure to stand up to the Democrats' base on any issue. Her husband gained credibility, and ultimately the presidency, by defying the left on welfare reform, trade and crime. The current Democratic base isn't nearly as barbaric as the extreme right but remains trapped within the corroded industrial-age structures of government and manufacturing. Clinton's recent defense of the Department of Veterans Affairs, a disaster in need of reform, is a sad demonstration of a standard liberal default position: that everything in government is just hunky-dory. All we need is more money.

The ability to stand athwart your strongest supporters is a character issue, especially among the people who actually decide elections—the slowly evaporating middle. Clinton is on the rise because her debating and congressional-hearing personas are tough as titanium, but her political persona remains vaguely vinyl. Americans tend not to like polyester Presidents, either. ◻

STUMP STUMBLES

At a recent town hall, Jeb Bush decried Donald Trump's experience, saying, **"I've got a lot of really cool things I could do other than . . . listening to people demonize me."**

"Overall veterans who do get treated are satisfied," Hillary Clinton told Rachel Maddow, pointing to Republican "berating" of the VA "in pursuit of this ideological agenda that they have." She later backtracked.

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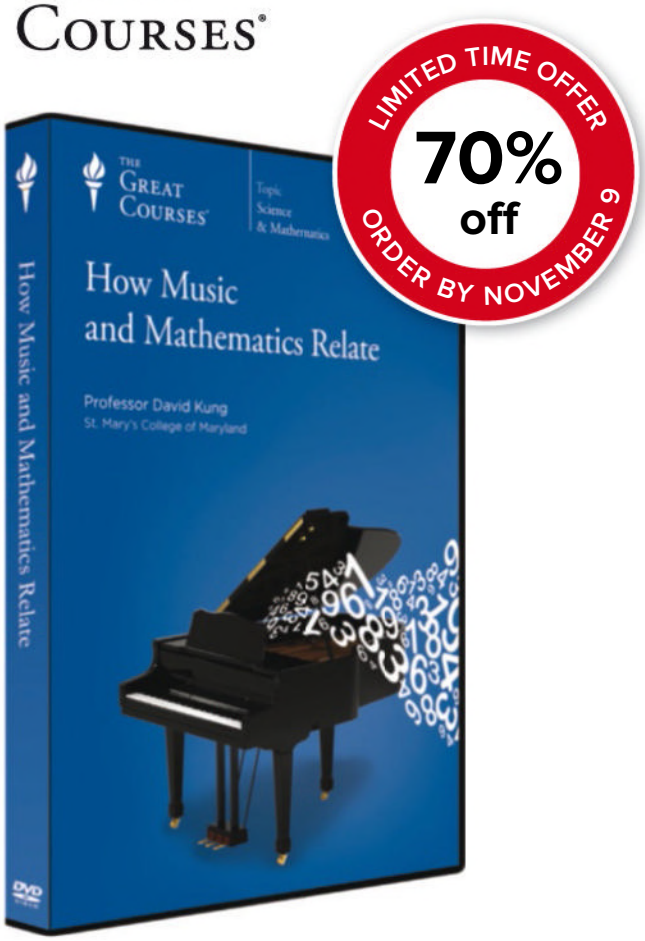

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HEALTH

THE WAR ON

A NEW REPORT LINKING MEAT WITH CANCER RAISES QUESTIONS ABOUT

PHOTOGRAPH BY JENS MORTENSEN

N DELICIOUS

AMERICA'S—AND THE WORLD'S—EATING HABITS

BY JEFFREY KLUGER

Americans love to talk about their freedoms. Most of the time they mean the familiar ones—speech and press and assembly, as well as the other high-minded things our forefathers made sure to include in the national contract. But there are other freedoms too—the freedom to be loud, the freedom to be large, the freedom to have an appetite for anything at all and then set out to satisfy it.

That's the freedom of rock 'n' roll and Super Bowls and Talladega and rodeos, of settling a continent and then, still not sated, following up with a helping of Alaska and Hawaii too. And for many of us it's also the everyday freedom, when we sit down at the table, to eat whatever we please. The modern American diet is a huge, sprawling, bib-under-the-chin affair of generous portions served up on demand. Most primally, that has meant a diet heavy in red meat and processed meat. The hamburger and the hot dog are as much national symbols as they are menu items (when Gemini 3 astronauts went into orbit in 1965, they smuggled up a corned beef sandwich and the nation had a good laugh).

Now this is being called into question by doctors, by public heath advocates and by the World Health Organization (WHO), which has not just Americans' well-being in mind but also that of the entire globe—including country after country to which America has eagerly exported its diet. In a sweeping review released on Oct. 26, the WHO officially identified processed meat as a Group 1 carcinogen, meaning the quality of the evidence firmly links it to cancer. Red meats fare little better, falling into Group 2A—foods or substances that probably cause cancer—a category that includes the toxic pesticide DDT, the chemical weapon mustard gas and the insecticide malathion. (Groups 2B, 3 and 4 are foods or substances that are possibly carcinogenic, not yet classifiable as carcinogenic or probably not carcinogenic, respectively.)

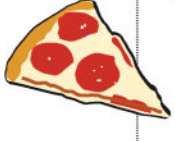
This immediately sparked a round of apocalyptic headlines, including many variations of HOT DOGS AS BAD FOR YOU AS CIGARETTES. Predictably, it also caused a lot of confusion for people who are trying to eat right but are buffeted by health recommendations that seem prone to being overturned years later. Because make no mistake: we like our meat. In

HOW PROCESSED MEAT CAN LEAD TO CANCER

Meat that's been smoked, salted, cured or changed by another process to enhance its flavor or make it last longer is what has health experts especially worried

SOME PROCESSED MEATS:

- **HOT DOGS**
- **PACKAGED TURKEY**
- **SAUSAGES**
- **CORNED BEEF**
- **PEPPERONI**
- **BEEF JERKY**
- **CANNED MEAT**
- **CHICKEN NUGGETS**
- **BOLOGNA & CHARCUTERIE**



THE THEORIES:

1

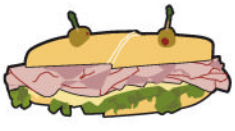
NITRATES AND NITRITES

A lot of processed meat contains nitrites or nitrates, which are salts from either synthetic or natural sources that are added to meat to preserve it. Nitrates often turn to nitrites in the body, where they can react with amines in the meat to form carcinogenic compounds that can **damage DNA.**

2

HEME IRON

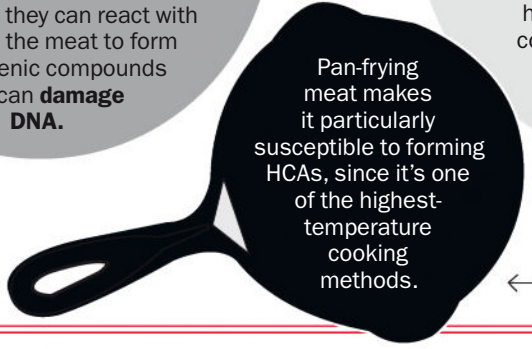
This important molecule, found most abundantly in red meat, transports iron in the body. But rat studies have shown that heme might contribute to cancer, possibly by catalyzing the formation of **N-nitroso compounds.** Scientists have theories as to why. For now, some lab studies have shown calcium can buffer against the harmful effects.



3

HIGH TEMPERATURES

Carcinogens can form when meat is fried, roasted or grilled at high temperatures. The meat produces more heterocyclic amines **(HCA)** and polycyclic aromatic hydrocarbons **(PAH)**—two compounds that have been shown to cause cancer in animals.



Pan-frying meat makes it particularly susceptible to forming HCAs, since it's one of the highest-temperature cooking methods.

A MAJOR BACON BUMMER:

PREVIOUS PAGES: GALLERY STOCK; PORK CHOP: GETTY IMAGES; ILLUSTRATIONS BY HEATHER JONES FOR TIME

2013, the average American consumed more than 71 lb. of beef, lamb, veal and pork; last year, Americans ate a collective 24.1 billion pounds of beef alone. And what Americans don't eat, they sell overseas, where economic growth has been matched by a demand for red meat. The U.S. is the world's second biggest exporter of pork and fourth biggest of beef. Like movies and music, American meat reaches round the world.

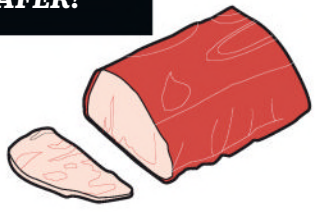
But this may need to be rethought. The truth is, the link between meat and cancer is not entirely new to scientists, and the evidence for it has been growing for a while. For decades, health experts have warned that red and processed meats are linked to cardiovascular disease, obesity and various forms of cancer. The first two of those dangers have always made sense, and have caused some people to cut down or swear off meat. But the last part of the troika—the cancer part—has been hedged with uncertainty. No more.

The link between meats and cancer had always been hedged. But it's growing more certain

So are we really talking about life without hot dogs and T-bones? The answer requires understanding not only what the science does—and doesn't—say about risk but also factoring in the stakeholders in this debate. That's a group that ranges from public health experts and consumer advocates to local farmers and giant agribusinesses—and the meat-loving public too. The fact is, lots of things are bad for us. Ultimately it's about taking the best information and using it to make smart choices.

THE CATEGORIES OF MEAT in the new study are broad and inclusive. Red meat is defined as "all types of mammalian muscle meat, such as beef, veal, pork, lamb, mutton, horse and goat." So goodbye to pork's claim to be "the other white meat." Processed meats include "meat that has been transformed through salting, curing, fermentation, smoking or other processes to enhance flavor or improve

IS TURKEY BACON SAFER?



NO.

In most studies, processed meat is treated as one category of food, regardless of whether it's from white meat, like turkey bacon, or red, like pork. That means there is no bacon loophole—even for the grass-fed or Canadian kinds. White meat has one potential advantage since it doesn't have as much heme iron. But until we know more about how processed meat causes cancer, **there's no proof one is safer than another.**

WHAT IF I BUY "NO NITRATES ADDED" MEAT?

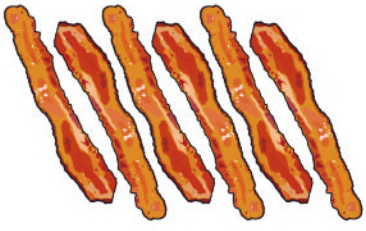
SAME DEAL.

Some no-nitrates-added products are **treated with celery juice,** which is naturally high in nitrates. But natural nitrates are still nitrates—and the body doesn't distinguish between them or the reactions they cause.

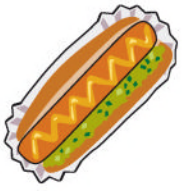
HOW MUCH MEAT RAISES CANCER RISK?

50 GRAMS PER DAY

According to the new report, that much daily processed meat increases the risk of colorectal cancer by 18%. In practice, that looks like:

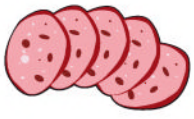


6 slices of bacon



1 hot dog

2 slices of ham



5 slices of hard salami

2 slices of Canadian bacon

GRAPHIC REPORTING BY MANDY OAKLANDER SOURCES: MARIANA STERN; WHO'S INTERNATIONAL AGENCY FOR RESEARCH ON CANCER; USDA NATIONAL NUTRIENT DATABASE FOR STANDARD REFERENCE; NATIONAL CANCER INSTITUTE

preservation."

That means, if you're following the new guidance, the end of the turkey-bacon dodge—it's still a processed food, and it's still bacon—as well as the frisson of dietary virtue that comes from ordering smoked turkey instead of salami at the deli counter, because, well, it's poultry.

The study, which was conducted by a respected WHO subsidiary, the International Agency for Research on Cancer (IARC), did not look at fresh poultry—not a great concern to public health experts, rather unanimously—but what it did say was worrisome to public health experts.

"According to most recent estimates," the authors wrote, "about 34,000 cancer deaths per year worldwide are attributable to diets high in processed meat." The study estimates a possible 50,000 deaths similarly attributable to red meat. Both of those numbers seem low compared to the 1 million deaths due to tobacco-related cancer. But in the U.S., there are about 2½ cases of colorectal cancer per year for every one death, which means that even if eating meat doesn't kill you, it could still make you very sick. Some researchers are at least trying to put that troubling fact in a positive light.

"One way that I'm thinking about this finding is that it actually gives us the opportunity of identifying one of the many important factors that contribute to colorectal cancer that we can do something about," says Dr. Mariana Stern, a cancer epidemiologist at the University of Southern California, who worked on the IARC paper.

No surprise, the meat industry is hitting back. According a statement by the North American Meat Institute (NAMI), a trade association that claims to represent companies that process 95% of U.S. red meat and 70% of turkey products, the new report "defies both common sense and numerous studies showing no correlation between meat and cancer. Scientific evidence shows cancer is a complex disease not caused by single foods."

At NAMI headquarters in Washington, bosses greeted the IARC report in a uniquely meat-centric way: ordering breakfast tacos with bacon and chorizo for the entire staff. "It's our own form of protest," says Janet Riley, an industry spokeswoman and the president of the National Hot Dog and Sausage Council. "It's pretty interesting, the reaction that consumers are having. There's a lot of pushback."

But the IARC report is a robust one. Much more than a single study, it is a so-called meta-analysis—a study of studies—evaluating 800 published papers. Twenty-two experts from 10 countries conducted the work and then voted on what findings to issue.

Those findings state that 50 grams of processed meat per day—one hot dog or about six pieces of bacon—raises the risk of colorectal cancer by 18%. Other cancers too were associated with red and processed meats, including stomach, prostate and pancreatic, but it was colorectal that produced the most persuasive numbers.

"We looked at a big reach of literature," says Stern. "There was sufficient evidence that processed meat causes colorectal cancer. Based on the limited evidence and the strong mechanistic evidence, we concluded that red meat is a probable carcinogen."

WARNINGS ABOUT MEAT go back a long way, but in recent years they've been piling up. An exhaustive 2007 study by the American Institute for Cancer Research and the World Cancer Research Fund pointed to a troubling link between animal protein and multiple forms of cancer. In 2009, a study sponsored in part by the National Institutes of Health (NIH) found that people who eat red and processed meats have a higher risk of dying of cancer, heart disease and other causes than people who don't. A smaller 2011 meta-analysis funded by World Cancer Research Fund International found a link between red and processed meats and colorectal cancer, and a 2013 study with 47 co-authors from across Europe and elsewhere linked meat with both increased cancer and heart-disease mortality. Even taking all this into account, the new IARC research is easily the largest and most conclusive to date.

There's a cruel irony to the fact that meat should be as dangerous as health experts warn, because we are hardwired to love every little thing about it. Predation is not just a nasty indulgence we picked up on our way through the state of nature; it's a nutritional must-do, or at least it was in our ancestors' times. Animal muscle is dense with proteins and other nutrients, and the fat from a cow or pig will serve the same purpose in our body as it did in its original owner's: as a repository for calories in the event of a food shortage or famine. To make sure we come when the dinner bell clangs, our brains recognize the smell of sizzling meat as singularly irresistible.

But it's in that sizzle that the trouble starts. Meats cooked at high heat produce what are known as polycyclic aromatic hydrocarbons (PAHs) and heterocyclic amines (HCAs). Both cause changes in DNA—and that can mean trouble. "Once you're talking about DNA damage, that's the origin of cancer," says Dr. David Katz, director of Yale University's Prevention Research Center. "With the right kind of mutation, the cell sort of escapes the normal oversight of replication. It becomes a rogue colony of cells, then it becomes a tumor."

In the case of processed meats, the biggest risks are sodium nitrates, which are added to foods principally as preservatives. Once they enter the body, however, they form nitrosamines, chemical compounds that are carcinogenic. "It's long been known that part of the processing of meats introduces carcinogens into the mix," says Katz, "particularly nitrates."

Even unprocessed red meats can lead to problems like this. Certain gut bacteria

That sizzle signals trouble. Meat cooked at high heat can produce carcinogens

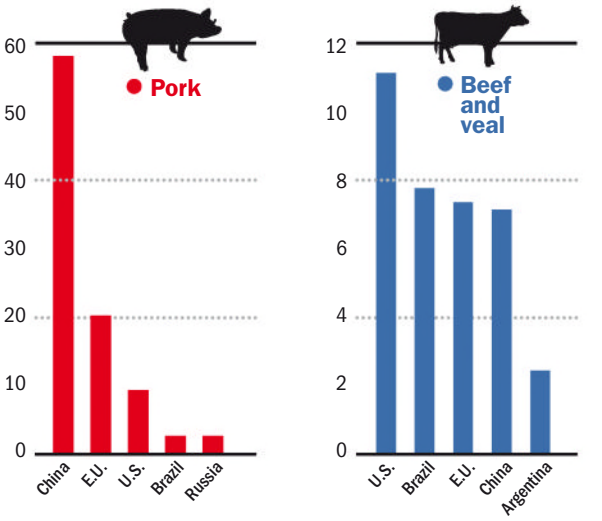
STEAK: GETTY IMAGES

MEAT BY THE NUMBERS

Here's who is eating—and exporting—the most pork and beef around the world

CONSUMPTION

Top 5 consumers in thousands of metric tons, 2015 estimates



GLOBAL EXPORTS

Top 10 exporters in thousands of metric tons, 2015 estimates

Beef and veal	1	India	2,400
	2	Brazil	2,005
	3	Australia	1,590
	4	U.S.	1,098
	5	New Zealand	555
	6	Paraguay	440
	7	Uruguay	375
	8	Canada	375
	9	E.U.	310
	10	Belarus	225
Pork	1	E.U.	2,250
	2	U.S.	2,155
	3	Canada	1,225
	4	Brazil	530
	5	China	200
	6	Chile	160
	7	Mexico	120
	8	Vietnam	40
	9	Australia	37
	10	Belarus	30

SOURCES: USDA; AMERICAN CANCER SOCIETY; INDEX MUNDI

49,700
Projected colorectal-cancer deaths in the U.S. this year; it's the third leading cause of cancer-related deaths

71.1 LB.
The average amount of red meat Americans consume per year

60%
Percentage of the meat consumed by Americans that falls into the "red meat" bucket; about **22%** of meat Americans eat is processed

can convert otherwise benign components of meat to nitrosamines, Stern warns. What's more, when meat is grilled enough to be charred—something that's all but unavoidable on a lot of backyard barbecuers—carcinogens can form.

Oh, and if you think you've gotten around the nitrate-nitrite problem by buying hot dogs and other processed meats labeled NO NITRATES ADDED, bad news: those products are treated instead with celery juice, which is naturally high in sodium nitrate. By themselves, most vegetables do contain nitrates—indeed, produce is the biggest source of dietary nitrate—but they also contain vitamin C, which inhibits nitrosamine production. But meats? Not so much.

Another factor in the red-meat mix is what's known as heme iron, which is a type of iron bonded with a metabolic molecule known as protoporphyrin. Plants contain only nonheme iron; meats of all kinds contain both heme and nonheme. In the Western world, heme iron makes up 10% to 15% of all iron in the diet, which is a lot. A larger share of heme iron is absorbed by the body than nonheme, and in the time the stuff spends hanging around, it can reach the colon, causing potentially toxic reactions.

"The heme iron may have a direct effect on the cells in the large bowel," says Stern. "These are all mechanisms that have been observed in both unprocessed and processed red meats."

NONE OF THIS comes at a good time for people who like to eat meat—to say nothing of those who make a living selling it. America has, of late, been in the grip of one of its periodic food fads, this one involving bacon. Bacon beer, bacon vodka, bacon milkshakes, bacon popcorn and, yes, bacon condoms—scented to smell like bacon and patterned to resemble it—have all hit the market. And none of that includes the proliferation of real bacon added to all manner of real dishes. It's a bustling time for restaurants catering to our taste for beef too, with premium steak houses doing $7 billion worth of business in the U.S. last year.

Still, the 71 lb. of red meat we consume per capita is actually down from 96.3 lb. in 1970, with poultry picking up much of the slack. Those numbers provide their own evidence of the cancer-meat link, however, since rates of colorectal cancer have been in similar decline, going from 59.5 per 100,000 people in 1975 to 38 in 2012. Whether this is indeed a result of reduced red-meat consumption or simply

better detection and intervention isn't clear. All the same, the estimates are that there will be 96,090 new cases of colon cancer in the U.S. this year and 39,610 of rectal cancer.

Figures like that are not always easy to understand and can be more alarming than they need to be. The lifetime risk for developing colorectal cancer is just 5% for men and a little lower for women. A hot dog a day would raise that risk by 18% *of the 5%*—topping you out at about a 6% overall risk. But that assumes that's all the red meat you ever eat, and those 1% increments add up fast.

The IARC report itself takes pains to put the findings in similar perspective, clearly defining the difference between a hazard and a risk—words that sound almost synonymous in ordinary language but are radically different in the context of epidemiology. "An agent is considered a cancer *hazard* if it is capable of causing cancer under some circumstances," the report states. "*Risk* measures the probability that cancer will occur, taking into account the level of exposure to the agent." In the same way, fire is an undeniable hazard to your home. The risk that the place will ever actually burn to the ground is another matter.

That's a point seized on by the meat producers—and it's a perfectly fair one. "The problem with cancer is that it occurs over a lifetime," says Ceci Snyder, a registered dietitian and a spokeswoman for the Pork Board, an industry marketing group. Noting that a lot of other variables like blood pressure, obesity and exercise can play key roles in cancer and overall health, she added, "We cannot discount the confounding factors."

Dave Warner, a spokesman for the National Pork Producers Council—the lobbying arm of the pork industry—took some comfort from the fact that the findings of the IARC were not unanimous. Seven of the 22 panelists either abstained from voting or openly disagreed with the findings. Still, the report did not require unanimity, and a supermajority of 68% confirmed its conclusions.

WHETHER ANY OF THIS will have much impact on American health policy is impossible to say, but as with all things in Washington, following the money does provide some clues. Agribusiness contributed about about $800 billion to the American GDP in 2013, and pockets that deep buy influence. The sector spent over $127 million on lobbying activities last year, according to the Center for Responsive Politics, with nearly 1,000 registered lobbyists on the payrolls. Political-action committees and other advocacy groups sympathetic to the industry contributed another $77.2 million. Three-quarters of that money went to Republicans.

The Food and Drug Administration did not seem terribly exercised by the IARC study, noting that the federal government carries out its own such research through the National Toxicology Program. "The NTP Report on Carcinogens has not specifically looked at red meats or processed meats as whole food items," says FDA spokeswoman Megan McSeveney. "These substances have not been nominated for review for the next edition of the Report on Carcinogens." The Department of Agriculture released a statement in response to the IARC announcement, "encourag[ing] Americans to lead an overall healthy, active lifestyle and eat a healthy, balanced diet."

But government nutrition recommendations are an ever changing thing. With the U.S. Department of Agriculture (USDA) set to release its 2015 dietary guidelines later this year, the hope among some health experts has been that the report will take a firmer hand with meat—particularly processed meat—and the IARC study may strengthen the case for that. The U.K. recommended that Britons who eat 90 grams or more of red or processed meat a day cut back to 70 grams, which is the current U.K. average. America's most recent guidelines did not go so far, recommending no upper limit but advising consumers to stick to lean meats only. To House Agriculture Committee chair Mike Conaway, a Texas Republican, even that's too much.

If you're following the new guidance, even smoked-turkey sandwiches will give you pause

Conaway calls the IARC report "a biased selection of studies performed by an organization notorious for distorting and misconstruing data. It is disappointing," he added, "that the tax dollars of hard-working Americans are being used to support the activist agenda of this international agency."

Senator Pat Roberts, a Kansas Republican, who is Conaway's counterpart on the Senate's Agriculture Committee, takes a more tolerant view. Citing the acknowledged nutritional value in red meat, he said, "When it comes to health and living a long life, the old adage 'everything in moderation' holds fast."

The final call will belong to the USDA. Any guidance the department offers will require balancing evolving science against consumer tastes and a significant share of the U.S. economy.

NOBODY PRETENDS THE American omnivore is a species in imminent decline. Like it or not, somewhere deep in even the most devoted vegan are the genes that crave meat. "There's no question that *Homo sapiens* adapted to eat both meat and plants," says Katz.

What's more, if it's true that an army travels on its stomach, it's true too that a nation defines itself the same way. There is a reason that when we think about Italy or Japan or Russia or Mexico we think of certain kinds of foods—and that's the case with the U.S too.

Yes, Americans will be healthier if we eat significantly less of all meats than we do. But no less than in our real DNA, the sights and scents and rituals of meat eating are in our cultural DNA. With moderation and smarts, we may be able to honor that legacy and at the same time honor our health. —*With reporting by* LESLIE DICKSTEIN, MANDY OAKLANDER AND ALEXANDRA SIFFERLIN/NEW YORK AND PHILIP ELLIOTT AND JAY NEWTON-SMALL/WASHINGTON

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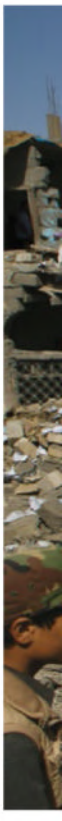
A man in a shelter in Rahban, on the outskirts of Saada City, a stronghold of the rebel Houthis

Yemen's Neglected Disaster

The war has taken a horrific toll on the country's people ***By Dan Stewart***
Photographs by Maria Turchenkova



AS SYRIA CONTINUES to sink into chaos, as the Taliban gains new territory in Afghanistan and as Iraq struggles to fight ISIS, an ignored war at the far end of the Arabian Peninsula has created a humanitarian crisis that threatens to become one of the most severe in the world.

Never a stable country, Yemen has been unraveling since the Houthis—a Shi'ite religious minority that has long demanded a greater say in how the country is governed—took control of the capital, Sana'a, in September 2014 and placed President Abdel Rabbo Mansour Hadi under house arrest. Hadi fled the country in March, and that month a coalition of 10 Arab nations led by Yemen's northern neighbor and Sunni power Saudi Arabia—and supported by the Saudis' longtime ally the U.S.—launched an air campaign to counter the Houthi forces, which number around 100,000.

The Saudi-led air strikes were nominally intended to allow Hadi to return and restore stability, but U.S. analysts say they are really part of a broader attempt to assert Sunni power against Shi'ite Iran, which has in the past lent both financial and logistical support to the Houthis. Saudi Arabia and other Gulf nations see this war as being part of an ongoing proxy fight against Iran—just as the civil conflict in Syria has become. But that's open to debate. A report from British think tank Chatham House concluded in February that "a large question mark remains over the extent to which Tehran [has] funded or armed the [Houthis]."

Whether with Iranian support or not, the Houthis have proved difficult to dislodge after seven months of strikes against their positions in the capital and in the province of Saada, their northern stronghold. The battle-seasoned Houthi militants have taken up secure positions in mountainous regions of the country's north while coalition warplanes reduce whole neighborhoods in Sana'a and Saada to rubble. While some 2,500 Yemeni civilians have been killed in the fighting since March, according to the U.N., more than 2 million have been driven from their homes, and millions more have been cut off from access

PHOTOGRAPHS BY MARIA TURCHENKOVA

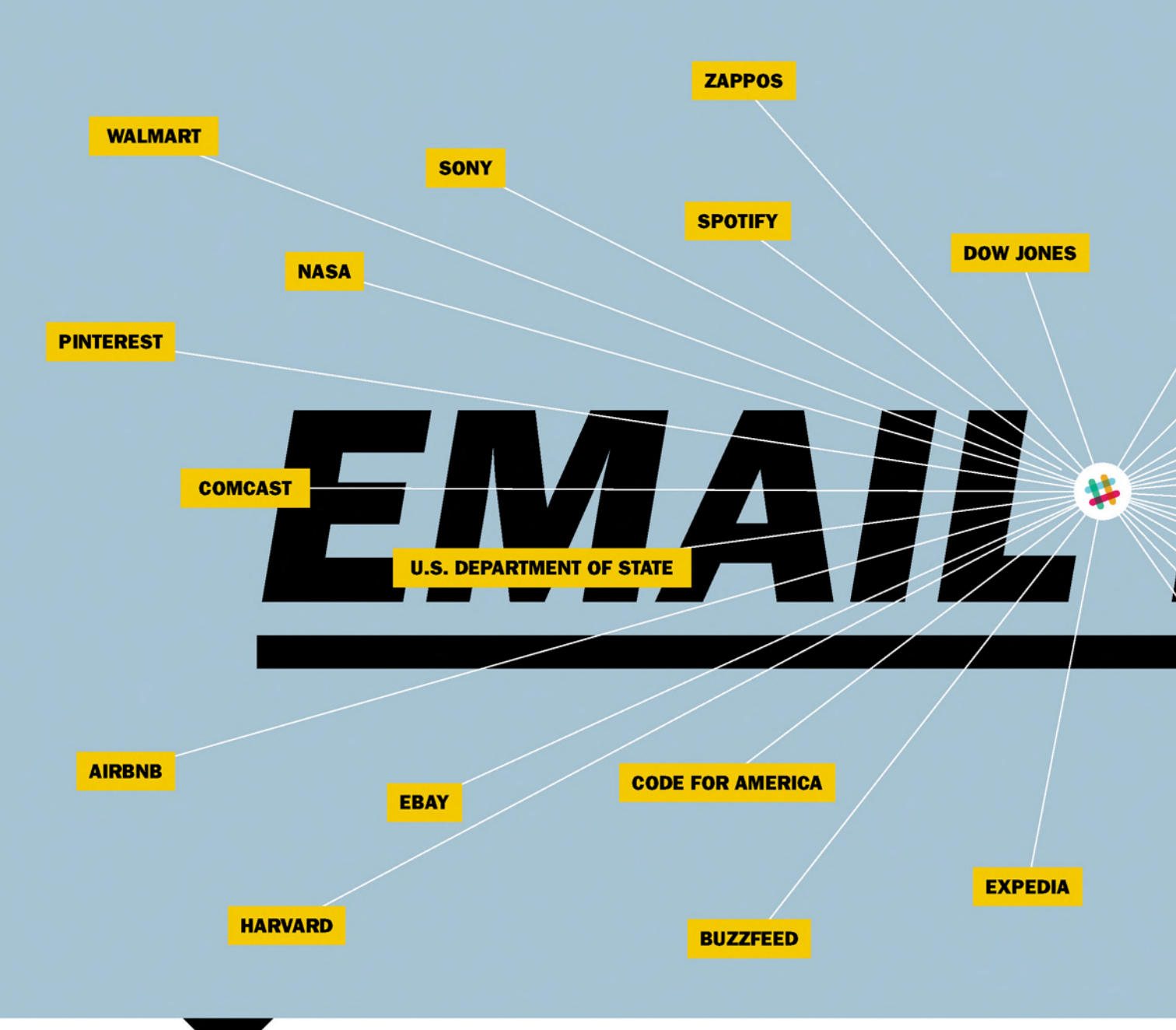
Clockwise from far left: An evening view of the city of Hajjah, where residents live without power; men in the rubble of a building in Amran destroyed by a Saudi air strike; women and children seeking shelter

A young girl at al-Majoura, a camp for displaced people; the camp is running low on both food and water, even as more refugees seek protection from the war in Yemen

to power, food and water. Refugee camps near the Saudi Arabian border are teeming with malnourished families. The U.N. Office for the Coordination of Humanitarian Affairs says that more than half the country's 25 million people are struggling to find food and almost two-thirds have no access to health care. A country that was already one of the world's poorest before the war has all but collapsed.

But the war shows no sign of slowing down. Since Sept. 4, when around five dozen coalition soldiers were killed in a dawn ambush by Houthi militants, the Arab coalition has intensified its bombardment of Sana'a and sent at least 5,000 ground troops to Yemen. The coalition is now said to be preparing to launch a ground offensive to retake Sana'a, which threatens to spill yet more civilian blood.

The U.S. is far from an impartial observer in this fight, having long partnered with the now ousted regime to conduct drone strikes on al-Qaeda in the Arabian Peninsula from Yemeni bases. Washington has been reluctant to rein in Sunni allies like Saudi Arabia still smarting from the recent nuclear deal with Iran, which they opposed. But absent some kind of intervention, Yemen is poised to sink further into famine and institutional failure. Like those in Syria and Libya, the starving civilians in these pictures by photographer Maria Turchenkova are victims of an old sectarian conflict reignited by forces they have little to do with—and even less power to resist. ◻



Slack's slick messaging software has convinced companies of all sizes that they can move past the inbox. But will what comes next be better—or worse?

BY SAMUEL P. JACOBS/ SAN FRANCISCO

PEOPLE ASK TWO QUESTIONS about Slack, the interoffice chat software used by some of the world's most closely watched companies. The first is whether the 21-month-old startup is actually worth its $2.8 billion valuation. The second is whether Slack is changing how much of the world works.

The first question is easier to answer. Even in an economy that has minted at least 65 new startups valued at $1 billion since January, Slack is growing fast. More than 1.7 million people have become daily users of the service since it was first released in February 2014; there were 10 times as many people using Slack in August of this year as there were during the same time last year. Venture-capital darlings Airbnb, BuzzFeed and Blue Bottle Coffee use it. So do *Fortune* 500 firms like Comcast and Walmart. Teams at NASA and the State Department are on Slack. (More than 2,000 people use Slack at Time Inc., which publishes this magazine and many others.) Not in a generation has a new tool been adopted more quickly by a wider variety of businesses or with such joy.

If you've used Facebook or Twitter, you'll understand why Slack is hot. The program—it's not that different from the instant messengers that were popular on the early Internet—helps different parts of a company communicate in real time. Slack preserves every comment in one easily searchable archive, and all those

messages now skip your dreaded inbox. Slack's users, on average, spend 10 hours each weekday plugged into the application, which means for those who are already on it, getting work done increasingly looks like being in Slack.

Slack CEO Stewart Butterfield, 42, says this makes the firm worth much more than its current valuation. He wants his business to exceed Facebook's. (The social network's revenue in 2014 was $12.5 billion. Slack's is on track to hit $45 million this year.) Butterfield also wants Slack to do for the next decade what Microsoft did for the past two by dominating how millions work. That won't be easy. "We have grown so fast," he says. "Every time we figure out the best way to do something, it becomes obsolete."

There is something of a gold rush today for companies making not terribly sexy but potentially lucrative office software adapted to the way people work now—from their smartphones, around the clock, passing information back and forth through the cloud. Around the globe, companies will spend more than $3 trillion on information technology this year, according to research firm Gartner. Nearly 1 out of 10 of those dollars is being spent on software like Slack.

Which brings us to the second, harder question: Is Slack changing work, or is Slack exploding because work is changing? For centuries—from steam engines to elevators, typewriters to telephones—technology has transformed where we work and how, the consequences rippling through the rest of our lives. If you look at it one way, crediting Slack with what a human-genome researcher uncovers or an astronomer finds is like crediting Steve Wozniak's garage with creating the Apple I. And yet how much and how fast work is about to be transformed is in the hands of people like Butterfield. If you work in an office, history shows you may not like what comes next.

SITTING IN A CONFERENCE ROOM in Slack's San Francisco office, it's fun to talk to Butterfield. Ask him what's wrong with how people work today and he'll say, "Well, let's go back to ancient Rome," and

free-associate from there. Ask him about Siri and Butterfield may call Apple's robotic personal assistant "f-cking idiotic." Says Cal Henderson, Butterfield's longtime friend and Slack's co-founder and chief technology officer, "He's like an annoying, small, little ginger man."

This quirkiness begins to make some sense when you learn Butterfield was raised on a commune in Lund, British Columbia. His family got running water when he was 4, electricity when he was 5 and a computer when he was 7, after moving to Vancouver for school. At 12, he legally changed his given name, Dharma Jeremy, to Stewart.

After studying philosophy at Cambridge, he became captivated with the possibilities of the Internet, eventually trying, with his then wife Caterina Fake, to create a "strange and absurdist" video game called *Game Neverending.* It was never released, but by 2004 they had repurposed some of their software into what became the massively popular photo-sharing service Flickr.

In 2005, Yahoo acquired Flickr for a reported $25 million, a decision that Butterfield came to regret. Three years later, he quit, writing one of Silicon Valley's most shared farewell notes. "Please accept my resignation," the email read. "And I don't need no fancy parties or gold watches … I will be spending more time with my family, tending to my small but growing alpaca herd and of course getting back to working with tin, my first love."

A year later, Butterfield launched another company and was back serenading colleagues with one of his ukuleles and trying to make another video game. Again he failed. But his outfit had built a chat tool for the company's first eight employees and decided to make a go with that. Because it helped them communicate with less tension, they called it Slack. It launched not long after.

WORK ON SLACK for a few days and you can see why people think it can kill the most dreaded form of communication: email. Office workers send or receive 122 emails from the average company email account every day, according to the Radicati Group, a research firm. If for the sake of argument, if not reality, you assume a 9-to-5 shift, that's a new piece of incoming or outgoing mail every four minutes. It is no wonder that Hillary Clinton, owner of the country's most scrutinized inbox, once asked an aide for a copy of *Send: Why People Email So Badly and How to Do It Better.*

A large part of what makes Slack better than email is how fluid its conversations are. The program—for which companies pay $6.67 to $12.50 per month per user—allows different parts of a business to set up different channels for discussions. In this channel, the information technology group talks. In that channel, marketing meets. Anytime someone wants to alert you to something, he or she tags your name to a message, just as on Facebook. You can follow your colleagues' exchanges in real time, or you can come back to that conversation later.

Slack CEO Stewart Butterfield's first hit was the photo-sharing service Flickr

Slack's makers say this kind of software enables transparency. If you are not copied on an email or not included in a meeting, you might not have a clue why a decision was made. This can breed resentment and confusion. Slack lets people who might have been forgotten or ignored look back and see why or how something happened. "The current modes of communication are outdated, and there's an opportunity for a new thing," says John O'Farrell, a Slack board member and partner at the venture-capital firm Andreessen Horowitz.

That's what's happening at Weaver Street Market, a North Carolina grocery chain, where workers check touchscreen computers running Slack to find out the latest on strawberry shipments, for instance. At the Philadelphia-based Tonic Design, Slack helped new coworkers get to know one another quickly after a recent merger. And at Hendricks Automotive, employees have been able to move as far away as Canada and Turkey while staying connected to colleagues back in Charlotte, N.C.

No doubt because it knows this increased connection can make people feel tethered to their jobs, Slack says it wants to tackle how much we work. The company is developing a do-not-disturb feature. People won't be interrupted by messages between, say, the hours of 10 p.m. and 8 a.m., in whatever time zone they live in. If you truly feel compelled to send someone a note during another person's off hours, the message won't appear in that colleague's Slack account until his or her do-not-disturb hours have ended.

Butterfield worries about this more than you might think. "I think that we're as a species not quite equipped to deal with the power of this stuff just in the same way we weren't quite equipped to deal with infinite free calories. This is how people end up with diabetes," he says. "We will now have the cognitive emotional diabetes of overinteracting with people who aren't physically present."

One solution may be to take people out of the equation. This is where Slack's robots come in. These pieces of automated software can respond to simple questions about when a meeting is scheduled or what's for lunch in the company cafeteria. At Polyvore, the e-commerce site recently acquired by Yahoo, bots periodically report back to employees on company financials. At the New York *Times,* engineers have built a bot that predicts for its editors what stories will perform best with readers on social media. "You can add them to your team and then they sit there and they're like a team member," says April Underwood, Slack's head of platform. Someday, as artificial intelligence improves, they may also fill out your expense reports or calculate next year's budget.

BUTTERFIELD: IAN ALLEN FOR TIME; TYPEWRITER: SSPL/GETTY IMAGES; FAX, COPIER: COURTESY XEROX HISTORICAL ARCHIVES

ANYONE SPOTTING the new, new thing that will change how we work forever has to do so knowing that history will likely make him look dumb. When advertising savant Jay Chiat suddenly (and very publicly) banished his workers from their desks in the 1990s, it looked like the day had dawned when the office as we know it was headed for the dustbin.

But eventually Chiat's workers got their offices back. (A lot of them were using their car trunks to store files.) And now 20 years later, a company like WeWork, an office-space provider, is valued at $10 billion. People like real offices and a permanent place to work after all.

You might call this the workplace-uncertainty principle: Every new tool adopted by office workers, no matter how valuable, has unintended consequences. For every upside, there's plenty of down. Think about popular open-office plans. Research has shown they increase stress and lower motivation. Or consider PowerPoint, Microsoft's ubiquitous presentation software, which in the past 25 years has become the standard way for millions of workers to communicate their ideas. That doesn't mean it's always the best way. Most famously, statistician Edward Tufte convinced NASA that a poor PowerPoint presentation on debris impact was one cause of the 2003 Space Shuttle Columbia explosion. Just because everyone is using one form of communication doesn't mean it's the right one for every conversation.

Take Slack's searchable archive, for example. Most office workers would be distressed to learn that their bosses are recording their every conversation. Now, with Slack, employees do that for their managers themselves. And that can create problems as workers leave a record of chatter they may regret. "We would like to get to the point where no one gets fired for using Slack," Butterfield says.

Slack also creates a setting that is much less buttoned-up than your typical corporate environment. Conversations have a tendency to look like text messaging or exchanges on newer social-media platforms such as Snapchat and WhatsApp. In practice this can become a rapid-fire exchange of animated GIFs and YouTube videos. (Bots can also be programmed to tell their own jokes.) Regardless of whether or not this constitutes "professional" communication, it may alienate older workers not well versed in expression through emojis.

And it can be distracting. "Slack is fun," says Michael Pryor, CEO of Trello, a company whose task-management software is popular with Slack users. Pryor says Slack can lead people to believe they are working when they are not. "A lot of time people can get sucked into this idea of reading every chat room and scanning things and reading around, but that's just distraction," he says. "You might as well be on Reddit." Talking about work is not necessarily productive.

Technology changes the way we talk to each other. That changes who we are. Slack helps text-based communication replace face-to-face interaction. In her new book, *Reclaiming Conversation: The Power of Talk in a Digital Age,* media scholar Sherry Turkle cautions against the dangers of this transformation. Research shows, she says, that empathy is lost when we privilege connectivity over conversation. Slack and technology like it quicken that development in many workplaces.

Tools like Slack also help make our transient workforce possible. Software company Intuit predicts that by the year 2020, freelancers, temporary workers, day laborers and independent contractors will constitute 40% of the American workforce. Having a tool that seamlessly preserves resources and instantly connects you with your temporary co-workers and short-term boss will ease that transition. Many of us won't have the 401(k) or the gold watch that was once the reward of a long career spent in the tin mines of our choosing. But we will have Slack—or something very much like it.

Even Butterfield says he cannot predict what Slack may be doing to us. But we know from history that it isn't likely to turn out how most people expect. Take perhaps the most recognizable workplace invention of the past century. In 1964 designer Robert Propst introduced something called the "Action Office." People were overjoyed. "Revolution Hits the Office," the New York *Post* proclaimed. Anyone who's entered a business since knows what happened next. We thought we were getting a smarter, more collaborative way to work.

Instead, we got the cubicle. ◻

WORKPLACE INNOVATIONS

1803
The polygraph
Thomas Jefferson relied on this invention, which linked two pens to create a copy of what the user wrote

1874
The Remington typewriter
Later advertised as "the ancestor of all present-day writing machines," this device gave us the QWERTY keyboard layout

1876
Alexander Graham Bell's telephone
Even before telephones were widespread, businessmen used private lines to link home and office

1907
The Dictaphone
It made stenographers more efficient, replacing live dictation taken in shorthand

1949
XeroX Model A copier
Nicknamed the "Ox Box" for its bulkiness, the machine quickly gave way to zippier models

1964
The fax machine
The LDX machine from XeroX weighed more than half a ton, but it could transmit a page in only 7½ seconds

1971
Email
TIME would later note that the new mode of communication "was supposed to put an end to memos, notepads and letters"

—Lily Rothman

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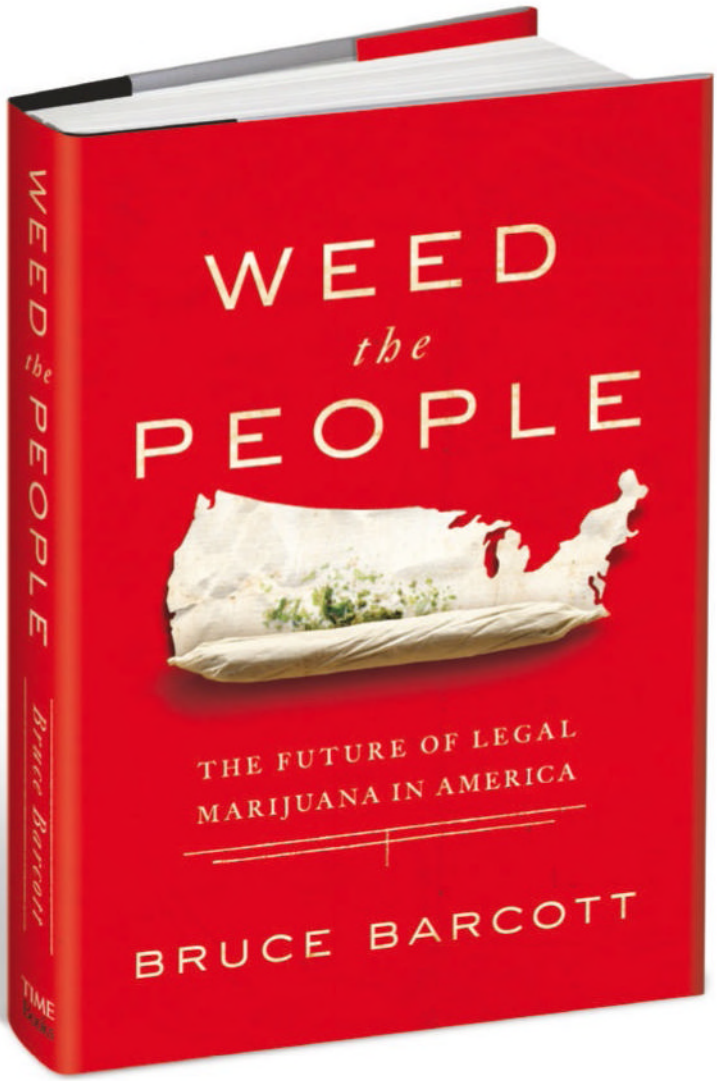

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'THE RESIDENTS OF SALEM WEREN'T FAKING THEIR FEAR OF WHAT LURKED IN THE DARK.' —PAGE 58

MUSIC

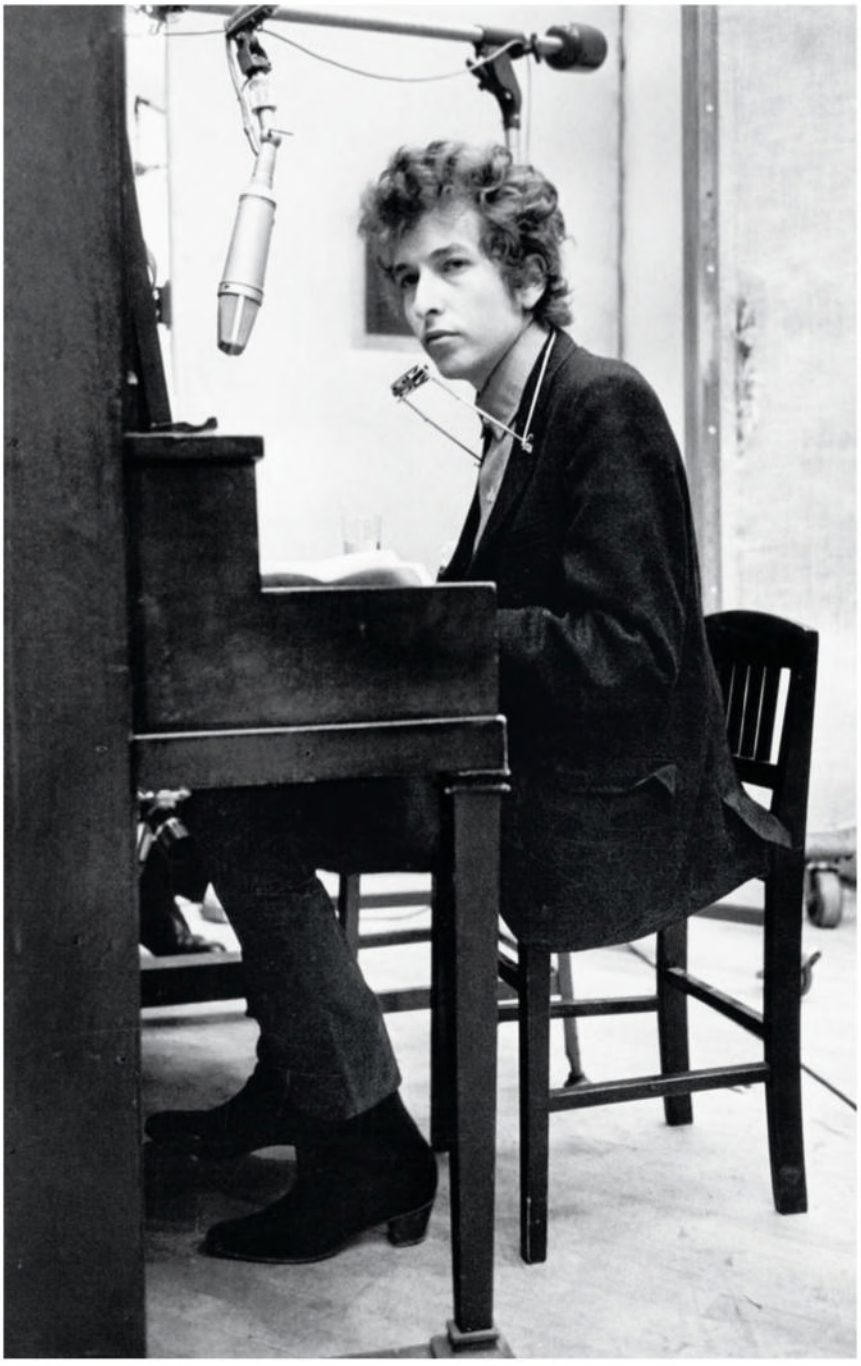
Outtakes from Dylan's most fertile era are the ballads of a spin man

By Jim Farber

A COLD DESCRIPTION OF THE latest archival release from Bob Dylan sounds like a satire on the worst possible box-set excesses. Titled *The Cutting Edge 1965–1966,* this 12th volume in the great bard's bottomless "Bootleg Series" weaves into its sprawl false starts, in-jokes, studio blather, abandoned arrangements, half-baked song ideas—nearly everything that occurred in this protean phase of Dylan's development but his sneezes.

The result could bankrupt the budget if not test even the most loyal fan's patience. While you can get *Cutting Edge* in reasonably scaled two- or six-CD configurations (at $20 and $150, respectively), a third version could star in its own episode of *Hoarders.* It groans with 18 discs and includes extras as fetishistic as a strip of film from *Don't Look Back,* the documentary of Dylan's 1965 tour, and is available at a price just south of $600.

Luckily, all three sets feature a great number of full performances, and even the most extreme ephemera chronicle an unparalleled segment in the Dylan canon. The set bores into a feverish 14-month stretch—from January 1965 to March 1966—that produced three albums that stand among his greatest works and are also among the most influential in rock history. On



'THAT THIN ... WILD MERCURY SOUND'
Dylan recording *Highway 61 Revisited* in New York City, 1965

MICHAEL OCHS ARCHIVES/GETTY IMAGES

Bringing It All Back Home, Highway 61 Revisited and *Blonde on Blonde,* Dylan ballooned from a folkie "protest singer" into an electric visionary beyond category. The songs—including the indelible "Subterranean Homesick Blues," "It's Alright, Ma (I'm Only Bleeding)," "Like a Rolling Stone" and "Sad-Eyed Lady of the Lowlands"—rocked with sounds and lyrics potent enough to launch a thousand bands and light countless imaginations.

Cutting Edge gives us a sustained look at how Dylan pulled all that off. It's a project about process, shadowing Dylan as he tests intriguingly different rhythms, arrangements, cadences and accompanists on songs as fixed in the public consciousness as "Positively 4th Street," "Just Like a Woman" and "Desolation Row."

Hearing Dylan knead his way into all the songs creates a riveting, you-are-there audio documentary. We listen in as a brilliant notion develops into a perfect work. Along the way, Dylan proves that a great composition can be turned in any direction. In four different versions of "It Takes a Lot to Laugh, It Takes a Train to Cry," the song morphs from a casual shuffle (Take 1) to a sexy swagger (Take 3) to a full-bore rave-up (Take 8). We hear a less sarcastic run at "Stuck Inside of Mobile with the Memphis Blues Again," a more ruminative "Desolation Row" with Dylan alone at the piano and an intimate treatment of "Love Minus Zero/No Limit." In most takes, Dylan varies the melodies, revealing them as diamonds, able to refract the light from endless directions.

One of Dylan's few mistakes was later solved by another artist. His attempt to use a drummer on "Mr. Tambourine Man" confounds him, yet one month after Dylan released his version the Byrds would release their cover, which nailed it, in the process perfecting folk-rock.

The two larger sets collect no fewer than 20 distinct runs at the game-changing single "Like a Rolling Stone." They include a 21-second failed attempt to nail the start of the song, as well as isolated audio tracks of the master recording that present Mike Bloomfield's escalating guitar figures on their own, plus Al Kooper's oceanic organ surges with drums. No one in his right mind would need such trivia were it not for the gripping context of a period that saw Dylan realize a style he'd long been searching for—what he called "that thin … wild mercury sound"—which is compelling enough to make the six-CD version the one to buy. By contrast, the double-CD seems too cursory while the 18-wheeler could get you arrested for stalking.

Among a host of rarities, a few stand out. "Jet Pilot," a gender-flipping roadhouse rocker backed by the Band, beat by five years Ray Davies' own transvestite salute, "Lola." There's a grinding rewrite of the Beatles' "I Wanna Be Your Man" (as "I Wanna Be Your Lover"), as well as an unnamed instrumental that serves as a virtual overture of motifs from *Blonde on Blonde.* Then there's a track that will stop your heart: a solo piano version of "She's Your Lover Now," a song left off *Blonde on Blonde.* It's the only recorded version of Dylan's full, eight-minute composition, and it captures him at his most sneering and pained.

Other than that, no what-if moments arise. The better-known versions all remain superior in meter, polish and performance. But hearing Dylan prod the melodies and finesse the rhythms allows them to be reanalyzed with the Talmudic scrutiny they deserve.

Key in all this are Dylan's vocals. Because of technical necessities of the day, he cut every one live, yet not a single take sees him dim the intensity of his engagement. Despite his keening tone and honking timbre, Dylan remains one of music's most underrated singers. Together, these variations show that songs millions thought they knew still have secrets to reveal. ◻

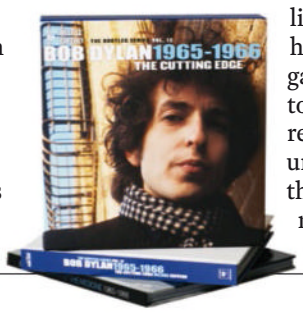
BEST OF BOB'S NEW BOX SET

"She's Your Lover Now" The 16th take is the sole full recording of the eight-minute song—and it's also the most withering.

"California" This never completed 12-bar blues would later be cannibalized for a handful of lyrics that ended up in "Outlaw Blues."

"Can You Please Crawl Out Your Window?" The sixth take on this originally single-only release captures Dylan at his most whimsical.

"Sad-Eyed Lady of the Lowlands" The first ever run-through of this now classic track went more than 10 minutes without a single flaw.



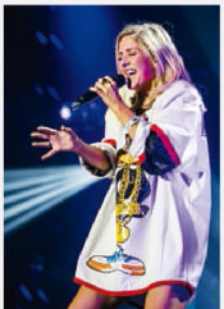
TIME PICKS

MOVIES
In director Catherine Hardwicke's soulful drama ***Miss You Already*** (Nov. 6), Toni Collette and Drew Barrymore play longtime best friends whose lives are upended when one is diagnosed with cancer.

TELEVISION
Parks and Recreation alumnus Aziz Ansari's new Netflix series, ***Master of None*** (Nov. 6), is a semi-autobiographical comedy following a 30-year-old actor as he stumbles toward adulthood.

BOOKS
Legendary author John Irving's 14th novel, ***Avenue of Mysteries,*** interweaves tales of a grown man's travels in the Philippines with disjointed, medication-induced dreams of his childhood in Mexico.

MUSIC
On her third album, *Delirium* (Nov. 6), British pop singer-songwriter **Ellie Goulding** brings a more empowered message to tried-and-true themes of love and heartbreak.



MASTER OF NONE: NETFLIX; GOULDING: GETTY IMAGES

In Halo 5, *players assume the identity of a futuristic supersoldier on the hunt*

VIDEO GAMES

Halo 5 is (a lot) more of the same

By Matt Peckham

"FIND SOMETHING TO SHOOT!" BAWLS ONE OF MY COMPUTER-CONTROLLED SQUADMATES in *Halo 5: Guardians* as I clamber onto a floodlit gangway. Enemies that look like molten lava fitted with armor swarm in front of me. Because I am playing as Master Chief, the strange, cyclopean hero of the series, who exists explicitly to shoot things, I do. In *Halo,* it's easy to find a target.

Technically the 10th title in the franchise, *Halo 5* ($60) is one of the most anticipated games of the fall. The series—first-person shooters that pit a 26th century supersoldier against theocratic aliens called the Covenant—has sold more than 65 million copies. This is also the first all-new *Halo* game for Microsoft's Xbox One console, which launched two years ago but has struggled to keep pace with Sony's PlayStation 4. Master Chief is basically Microsoft's Mario, and Microsoft needs a hero now.

Though *Halo*'s setting is futuristic, its DNA lies in the past. Back in 2001, the original convinced players that first-person shooters could be fun on living-room consoles, helping mint a generation of Xbox diehards. But things have changed since then: there are dozens of shooters on the market, most updated annually. And the hardest of hardcore players are increasingly gravitating toward competitive online games, most of them free, that change over time rather than banking on the blockbuster action sequences that turned previous *Halo*s into must-buys. Today's shooters, in other words, need some fresh ideas.

Perhaps with this in mind, *Halo 5* mixes things up by subtracting Master Chief from three-quarters of the game, playing coy with his motives and questioning his loyalties. For most of the game, you play as Spartan Locke, another supersoldier, tasked with hunting Chief down. But where past story lines have cleverly balanced space-opera themes with visual spectacle, the payoff this time lacks the subversive punch of the setup. In the end, the story feels disappointingly by the numbers, the mysteries not so mysterious after all, the archetypes ultimately shuffled back to their starting positions.

That's not to say the game isn't fun. *Halo 5* handles brilliantly: game play is brisk, uncomplicated and joyfully fierce. The game's locations are also beautifully rendered, putting you in the midst of ethereal alien worlds and battle-scarred space stations as you obliterate waves of attackers.

Halo 5's saving grace may be its online multiplayer modes, which have been tuned by developer 343 Industries to appeal to the type of player liable to skip the story mode entirely. Multiplayer levels are replete with curling tunnels, climbable platforms and dead-end corners that result in topsy-turvy, tactically exuberant play. The game's newest mode, Warzone, though unavailable to test as this review was under way, promises to let dozens of players brawl on mammoth maps. There are multiple ways to win in Warzone, which should keep things interesting in the long run.

If you are a *Halo* buff, *Halo 5* will probably feel like coming home—a graphically souped-up take on the same approach that's resonated with fans for 14 years. But for other gamers, that formula may finally be wearing thin. ◻

BLOCKBUSTER SEASON

NOV. 6
Call of Duty: Black Ops III A grim war play in far-flung battle zones teeming with robotic supersoldiers (PC, PlayStation 3 & 4, Xbox 360 & One)

NOV. 10
Fallout 4 A post-apocalyptic open world that lets players build settlements for survivors (PC, PlayStation 4, Xbox One)

NOV. 10
Rise of the Tomb Raider In this sequel, players explore a mythical Siberian city as heroine Lara Croft (Xbox One)

NOV. 17
Star Wars: Battlefront A shoot-a-thon staged in iconic *Star Wars* locations like Endor, Hoth and Tatooine (PC, PlayStation 4, Xbox One)

MICROSOFT

Bullock's savvy political adviser seeks redemption in an ugly Bolivian presidential campaign

REVIEW

Crisis wages political war with an all-too-easy message

IN *OUR BRAND IS CRISIS,* SANDRA BULLOCK BITES INTO A meaty role, playing a political strategist hired to rescue the presidential campaign of an unpopular, elitist Bolivian candidate. Inspired by Rachel Boynton's 2005 documentary of the same name, in which the gurus were all men, the movie stars Bullock in a role originally intended for George Clooney, reshaping it to fit a likable star whose brand is playing professional women—astronaut, FBI agent—at home in a workplace of men. Bullock's political pro, Jane Bodine, nicknamed Calamity, is brilliant and ruthless but also a mess, because endearing dishevelment and episodes of lovable recklessness are hallmarks of any Bullockian woman. As written by Peter Straughan *(Tinker Tailor Soldier Spy),* directed by David Gordon Green *(Pineapple Express)* and produced by Clooney and Grant Heslov, this Jane is a great gift to the star.

Jane is first seen amid a crisis of faith after a series of her campaigns flop. She lost those races to candidates managed by her nemesis, played with weaselly joy by Billy Bob Thornton. The energetic but unsteady plot that follows is part *Survivor*-like parry of dirty political tricks, part lively tango between Bullock and Thornton and, ultimately, a call to political conscience. That last inflection, the undertone in many Clooney-Heslov productions—*Argo, The Ides of March* and *Good Night, and Good Luck*—is meant to be the takeaway. But it is also the easy way out of a bitterly absurd story, as would-be American Presidents may well pay experts to advise on focus-group-tested adjustments in sound bites, hairdo, talking points and the optics of whether a candidate's sleeves should be rolled up—all the better to convey the brand.

—LISA SCHWARZBAUM

> Jane is brilliant and ruthless but also a mess. Endearing dishevelment and lovable recklessness are hallmarks of any Bullockian woman

REVIEW

A colorful journey to *Brooklyn*

THE BEAUTIFUL *BROOKLYN* evokes a family album filled with earlier lives, yet director John Crowley's film, from Colm Tóibín's novel, is no monochrome remembrance. With rich, complex emotions and an enthralling performance by Saoirse Ronan *(Atonement),* it's a full-hearted drama realized with a bold palette. Ronan plays Eilis Lacey, who leaves Ireland for New York City in 1951. Heartbroken at being separated from her mum and sister, she moves into a Brooklyn boarding house, studies bookkeeping and meets sweet, funny Tony (Emory Cohen), a first-generation Italian-American. They sway together at neighborhood socials, kiss at Coney Island and plan a future while swooning on doorsteps. When tragedy takes Eilis back to Ireland, she's courted by Jim (Domhnall Gleeson) and faces a choice. Filled with lovely details and boasting a layered script by Nick Hornby, *Brooklyn* is a sweet, sophisticated story about honoring the past while reimagining where home is.

—JOE NEUMAIER

Ronan and Cohen charm in Brooklyn*'s 1950s New York*

OUR BRAND IS CRISIS: WARNER BROS.; BROOKLYN: FOX SEARCHLIGHT

ALL-NEW

fire HD 8

MORE DURABLE THAN IPAD AIR

The Fire HD 8 is our all-new powerhouse tablet that's almost twice as durable as iPad Air 2. With an HD screen, quad-core processor, and access to 38 million movies, TV episodes, songs, books, apps and more, it's the perfect device for entertainment.

Starting at $149.99

Engineered by amazon

A survey shows how Frank Stella knocked abstraction flat, then sent it flying

By Richard Lacayo

Stella, in June, in his studio in Rock Tavern, N.Y.

IT GOES WITHOUT SAYING THAT AT THE AGE OF 79, Frank Stella is one of the greatest living American painters. He's also one of art's great apostates, a man who abandoned a faith he helped to establish. In the 1960s he was one of the founding figures of minimalism, and his stark, bracing canvases were lodestars of an austere new abstraction. But before he hit 40 he had made an about-face. The high priest of flatness became the king of giddy overload. Some artists, like Mark Rothko or Franz Kline, arrive at a signature style and stay with it all their lives. Stella is not one of them.

"Frank Stella: A Retrospective," which runs at the Whitney Museum of American Art in New York City through March 7, then moves to the Modern Art Museum of Fort Worth, adroitly takes you through Stella's long strange trip. It began with the so-called Black Paintings, blunt-force canvases that Stella, fresh out of Princeton, started producing in 1958. They consisted of uniform black bands, each about 2½ inches wide, separated like furrows in a plowed field by very thin channels of unpainted canvas that gave the appearance of trembling white stripes. In some pictures those stripes paralleled the edges of the canvas. In others they crossed it at a diagonal. Either way they were an unequivocal announcement that this painting was nothing more than a symmetrical pattern of white lines on a flat black surface. As Stella famously put it, "What you see is what you see."

By the late '50s, with Abstract Expressionism in sharp decline, reduction and flatness had become bywords of newer kinds of abstraction. Color-field painters like Barnett Newman and Ellsworth Kelly were working in broad plains of solid color. But the brazen austerity of Stella's patterning was something else. This was polemical art with a vengeance, a refusal not just of the charged brushwork and psychodrama of AbEx but also a repudiation of what most people thought were essentials of any painting, even an abstraction: illusion, complexity, spatial depth and—hey, why not?—feeling. Stella actually welcomed comparisons between his work and the product of a rubber stamp. "I wanted something that was direct, right to your eye," he said. "You got the whole thing right away." And he warned people not to search his work for signs of spiritual transcendence, utopian yearnings or submerged traces of the artist's soul—the associations

STELLA: TODD HEISLER—THE NEW YORK TIMES/REDUX; GOBBA, ZOPPA E COLLOTORTO: THE ART INSTITUTE OF CHICAGO; MR. AND MRS. FRANK G. LOGAN PURCHASE PRIZE FUND; ADA TURNBULL HERTLE ENDOWMENT 1986.93. © 2015 FRANK STELLA/ARTISTS RIGHTS SOCIETY, NEW YORK

Three ways to be abstract, clockwise from top:

Empress of India *(1966)*

Eskimo Curlew *(1976)*

Gobba, zoppa e collotorto *(1985)*

that had surrounded and even justified many earlier kinds of abstraction, from Kandinsky to Mondrian and Pollock. Stella's paintings were entirely self-justifying: pure material producing a straightforward optical event.

It was hard to see at first where Stella could go from the ground zero of painting he had cleared, but all through the '60s he rolled out powerful variations on his first ideas, venturing into bright color, including aluminum and copper paint, and rolling out shaped canvases of many kinds—notched, triangular, curved, snaking or asymmetrical. These turned out, mostly, to be fascinating, with a matter-of-fact potency and elegance. Who could say no to a taut crescendo like *Empress of India,* an immense canvas in which four notched chevrons become a collective force field? Best of all were the rhythmic circles and semicircles of his *Protractor* series. Indisputably beautiful, they were simultaneously cerebral and intellectually rigorous, always based on a structural premise of some kind, always visibly driven by the imperatives of their underlying idea.

But it's a short step sometimes from rigor to rigor mortis, and by the early 1970s Stella was tiring of his own militant flatness. He sensed a crisis for abstraction generally, a crisis of limited pictorial resources and dwindling, repetitive outcomes. Envying the power of the deep recessional space in work by 17th century masters like Rubens and Caravaggio, he wanted to recover for abstract painting the same depth and spatial drama—no matter that his own earlier works had been instrumental in driving it out. Eventually Stella decided to go for broke. To reintroduce deep space into his paintings, he decided to make them more like sculpture. He would never call them that, but all the same he started to construct his pictures out of elements that projected physically away from the wall.

Within a few years we'd see Stella unchained, creating dense and merry wall assemblages like *Eskimo Curlew,* work with swooping arabesques made from cut steel and aluminum, and later from poured molten metal and even 3-D-printer-formed plastic. And while in his earlier work the color was always applied more or less evenly, now he was spreading ropes of Day-Glo spray paint in graffiti-tag scribbles. Where once he was rational and methodical, now he seemed instinctive and improvisatory. It was as if Mondrian had morphed into de Kooning.

One unsurprising takeaway from this show, organized by Fort Worth's Michael Auping and Whitney director Adam D. Weinberg, is that Stella's later work can be hugely inventive and gratifying. (And also sometimes congested and semichaotic—euphoria is tough to control.) But did it actually solve that crisis of abstraction? With some notable exceptions, like a long series of works alluding to chapters of *Moby Dick,* for the most part Stella tried to reinvigorate abstraction simply by adjusting its visual elements—by adopting the complex space, forms and carnival palette of irresistible pictures like *Gobba, zoppa e collotorto* (a title borrowed from an Italian folktale, "Hunchback, Wryneck, Hobbler"). But the fundamental problem for "pure" abstraction is that it doesn't refer much to the world outside the picture. When art has nothing to talk about except shape, color and space, it can end up talking to itself, even when the conversation is carried on at Stella's high level. But if that problem remains unsolved, we can only be grateful for all the places it led Stella in his search for a solution. Once he left the flatlands, he shot for the moon. □

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The business of bringing luxury to the masses

By Kelly Conniff and Matt Vella

HERE'S THE STORY OF A CASHmere sweater: ultra-fine fibers from the hairs of a particular goat, spun into delicate Italian thread. At Bergdorf's, a Brunello Cucinelli pullover runs $3,215. J. Crew sells a similar style for $278. Everlane's version: $125.

Not surprisingly, the four-year-old online-only venture has seen sales jump. The label touts its "radical transparency"; a shopper can browse Everlane's scarves as easily as she can read about the factory in Scotland where they're made. Says 30-year-old Everlane CEO Michael Preysman: "People want to know where their clothing is made and what it costs to make. There isn't a lot of information in the retail space."

Everlane is one of a raft of new e-brands trying to fill the quality and price gap between JCPenney and J. Crew—or even JCPenney and Gucci. Warby Parker, a maker of tony-looking eyeglass frames, started the modern direct-to-consumer trend when it launched in 2010. Since then it has been joined by Everlane, M. Gemi in women's shoes and DSTLD in denim, among others. The fashion startups claim rigid adherence to quality, affordable prices and minimalist design—anonymous luxury.

That approach is in line with shifting consumer tastes. According to the research firm McKinsey, 80% of luxury-shopping Americans prefer to do so whenever they have the time, and 63% of them would rather not have a salesperson hovering. Seven years after the financial crisis, a taste for luxe has rebounded, if not a willingness to spend so much. ▯

Head-to-toe style

THE ARRIVALS
Each piece of outerwear from this Manhattan venture is designed in the U.S. and named after an architect or building. Cassel camel topcoat, ***$385***

WARBY PARKER
The New York City startup donates a pair of glasses for each pair purchased. Red Penrose sunglasses, ***$195***

EVERLANE
This Bay Area–based clothing and accessory brand offers a waitlist for to-be-released items. Black Petra cross-body purse, ***$365***

TRUE & CO
The San Francisco lingerie company uses a personality quiz and algorithms to customize shopping. Black Brea muscle tee, ***$36***

DSTLD
This Los Angeles premium-denim startup uses high-quality suppliers. High-waist skinny jeans in vintage wash, ***$65***

M. GEMI
Serial fashion entrepreneur Ben Fischman (Rue La La, Lids) started his Boston company in 2015. Plum Esatto pump, ***$278***

SUZANNE DARCY FOR TIME

What 1 in 4 women
will be wearing this fall.

There's nothing pretty about it. 1 in 4 women will be impacted by domestic violence in her lifetime. Yet there's an even darker side. 98% of these women are trapped because of the financial control abusers have over them. It's a secret prison no one's talked about, until now.

Join with The Allstate Foundation at **PurplePurse.com** to recognize the signs of financial abuse and help women gain the financial knowledge, skills and resources they need to break free.

Purple Purse
ALLSTATE FOUNDATION

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Protect against Domestic Violence

QUICK TALK

Tyler Oakley

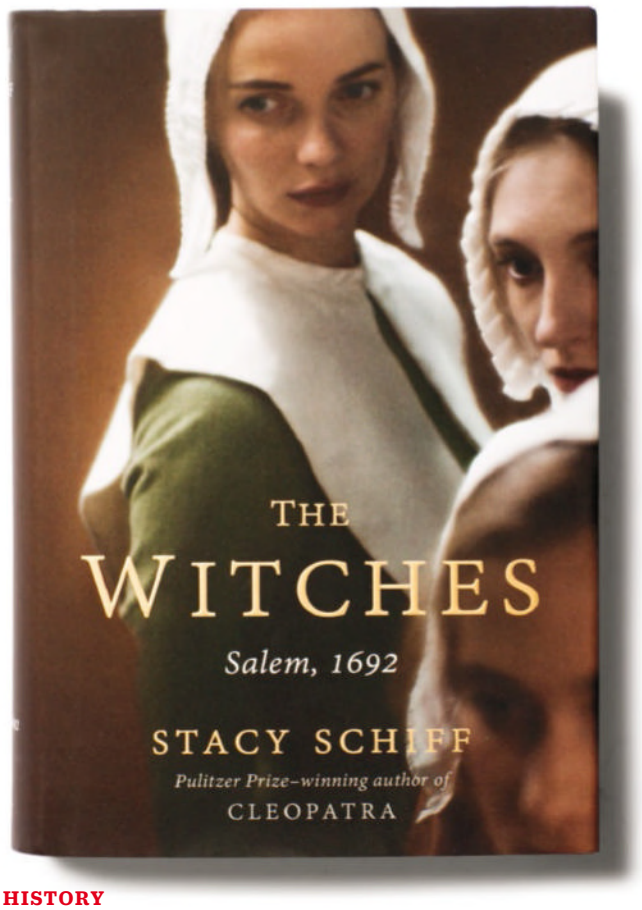
The Internet personality, 26, has over 7 million subscribers to his YouTube channel, where he uploads goofy, confessional-style clips like a video journal. Now he's released Binge, *a book of essays on topics from body image to relationship woes.* —DANIEL D'ADDARIO

Teens compare themselves with images they see online. Do you feel a sense of responsibility? YouTube has always been a diary for me. But regardless of my intention, if people are looking at what I do and are treating it like I'm a role model, it doesn't matter whether or not I want to be.

I don't know of many 35-year-old YouTubers. How will you adjust your act as you get older? Who knows? If I still love it when I'm married with kids and I'm daily vlogging changing diapers, that's cool. The past eight years are a scrapbook where I can look at any week going back to my freshman year of college and see what I was up to.

What makes what you do a talent? There's a lot that goes into it and makes it seem effortless. I very much want to show behind the scenes so that people can get a better understanding of it. When I think about my favorite creators, when you take away the editing and the lighting, they're great storytellers. Being a part of a new type of entertainment makes me want to open my eyes and be less critical of other types of entertainment that I don't really get. Who am I to say something is valid or not?

Your appeal comes from your relatability, but you've interviewed the First Lady. When will your life become unrelatable to your fans? Authenticity is more important than attempting to seem relatable. I would rather be me than something that's more retweetable.



HISTORY

The past comes back to haunt us

EVEN TODAY, HAUNTED HORDES DE-scend on Salem. The Massachusetts city draws a quarter-million tourists each October with its Devil's Chase fun run, magic shows, booze cruises, séances, parades and the Official Salem Witches' Halloween Ball. All that fun, of course, comes at a somewhat forgotten cost: the lives that ended during the 1692 witch trials. And as Stacy Schiff demonstrates in her new work of history, *The Witches: Salem, 1692,* we still know frighteningly little about that strange, terrifying year.

The hallmark of a great scary story is that it gets scarier the longer you sit with it. Come home from the bonfire, climb into your warm bed, remind yourself that the hitchhiker with the hook isn't real—but suddenly the branch scraping on the windowpane becomes something altogether more sinister.

Salem, in Schiff's telling, has that

MAD MAGIC Schiff quotes J.K. Rowling's Professor Dumbledore to explain why spectral evidence was used in court: "Of course it is happening inside your head, Harry, but why on earth should that mean that it is not real?"

power. In the Massachusetts woods, a Puritan village is afflicted by the devil. His guilty consorts—mostly women—live among the innocent, as their neighbors and relatives. The village, with the help of the most learned men of the colony, sets out to find them. The witches are fearsome, but the witch trials become more so. Those who profess innocence are sent to death, unable to prove that they are not guilty of a crime that was itself beyond proof. "Witchcraft inscribed a vicious circle," Schiff writes, "its allegation generating witchlike behavior." The year passes, 19 people are executed, and the mist clears as suddenly as it settled.

The Witches is a closely researched ticktock of the trials. It's no *Crucible,* privileging metaphor over truth, but it won't substantially change your idea of what happened. What it adds is detail—like the sheriff who seizes estates of the accused even before their convictions—and depth.

Schiff, who won a Pulitzer Prize in 2000 for *Vera,* her biography of Vladimir Nabokov's wife, and made the bestseller list in 2010 with *Cleopatra: A Life,* is skilled at turning centuries-old documents into a visceral universe. Salem was surrounded by a frightening wilderness, and where the wilderness stopped, the familiar wasn't much better. The village was a hotbed of property disputes, religious differences and family feuds. Life veered between drudgery, prayer and terror. The Puritan belief system also left Salemites unlikely to chalk anything up to chance, which made them seek a guilty party for every happening, which is a scary thought in itself. The residents of Salem were wrong about a lot—and by the end of 1692, many of them knew it—but they weren't faking their fear of what lurked in the dark.

The obvious question here is *Why?* Why did the accusers start down this path, and so quickly, and why did anyone believe them? That's what readers want to hear, and the possible answers Schiff uncovers are intriguing: political upheaval, social imbalances, psychological disorders, even fairy tales. But while she occasionally leans on the crutch of suggesting that a revelation is forthcoming, she also knows that she can't fully resolve the question. Though Massachusetts Puritans were usually reliable record keepers, many chose to omit or expunge this saga.

Schiff introduces the text with several pages of dramatis personae and a quote from Chekhov, and the trials present a beginning-middle-end arc, but the drama here doesn't take a traditional narrative structure. There's no real climax or denouement. Unlike *Cleopatra,* this work must also struggle with the formidable hurdle of having several compelling characters—bewitched tweenagers, stubborn justices, the omnipresent Cotton Mather—but no protagonist. As a result, the experience can become less like a scary movie than a haunted house: one fright follows another, and they can easily blur together.

> The devil left the judges 'sinfully, yea hotly, and madly, mauling one another in the dark.'
>
> The minister **COTTON MATHER**, a major figure in *The Witches,* in his 1693 account of the trials

It's when you abandon the *Why?* that other questions begin to bubble. What do their contracts with the devil tell us about 17th century girls who'd sell their souls for help with chores? What do the trials say about the path and wake of rumor? And, while Schiff leaves it mostly unsaid, how could we stop a version of this hysteria from happening again?

By the time the last witch hanged, Salem's upheaval was more than spectral. Fortunes were squandered. Children were orphaned. Even the church was hit, as many residents were forced to re-examine the beliefs that had led them so far astray. The village was dazed and preferred to forget, and centuries passed without the true causes of the episode revealing themselves. Centuries more will likely pass the same way; if Schiff can't nail down a final answer, it seems unlikely anyone will. Maybe that's because there isn't one.

That's why the witch hunt has endured as a scary story. If we can't say how it started, it can't teach us how to prevent its modern incarnations—and that's enough to make anyone shiver.

—LILY ROTHMAN

OAKLEY: JASON MERRITT—GETTY IMAGES

FICTION

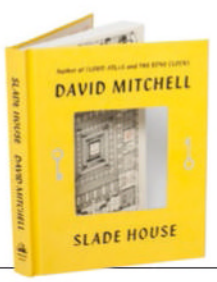
The house of the spirits—evil ones

DAVID MITCHELL'S NEW novel is his *Turn of the Screw:* a creepy little ghost story replete with literary ambition. It started life as a series of tweets, but it ended up the latest installment in the *Cloud Atlas* author's incomparable multivolume saga of immortal bearers of light vs. parasitic soul suckers.

Let me explain. *Slade House* begins in 1979, with a boy hurrying down a London street after his mother, late for a very important date. From the moment young Nathan pushes open the small black door in Slade Alley, his life is in danger—or rather, his soul is. The house's inhabitants, a twin brother and sister, have preyed for decades on the psychic energy of emotionally sensitive people. But they don't know that across space and time, their victims are working to bring about their downfall.

Mitchell flits among the realest of voices—a shy teenage girl, a washed-up cop—in the most supernatural of settings: a brilliant, career-long high-wire act. If you haven't read him yet, *Slade House* is your 238-page, pocket-size gateway drug. Go ahead, try it. You only live once. Well, most of us do, anyway.

—RADHIKA JONES



LOVE IT / LEAVE IT

TIME'S WEEKLY TAKE ON WHAT POPPED IN CULTURE

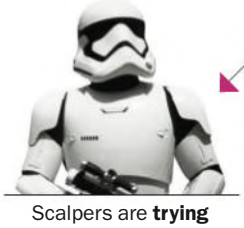
Sesame Street **introduced its first character with autism,** Julia, in hopes of destigmatizing the disorder and reducing bullying.

Apple's new iPhone update **will introduce 184 new emojis.** Among them:

Seattle Seahawks player Marshawn Lynch developed a **Beast Mode Frappuccino for Starbucks.** The drink contains protein powder and comes topped with purple berry drizzle.

J.K. Rowling's new play, on London's West End, **will feature Harry Potter as an adult.**

Laverne Cox **will play the eccentric Dr. Frank-N-Furter** in a Fox remake of *The Rocky Horror Picture Show.*



Scalpers are **trying to resell *Star Wars: The Force Awakens* tickets** for as much as $10,000.

Ben & Jerry's is partnering with Colorado's New Belgium Brewing to make **craft-beer ice cream.**

Discovery announced that its long-running *MythBusters* series **will end after its next season.**

The Weeknd told *Rolling Stone* that **Taylor Swift "started petting my hair"** the first time they met:

'That's when I was like, I definitely need a drink.'

A century-old cracker, salvaged from the survival kit of a *Titanic* passenger, **sold for more than $23,000.**

A deleted scene on the new *Jurassic World* DVD shows Chris Pratt's character **smearing himself in dinosaur poop.**

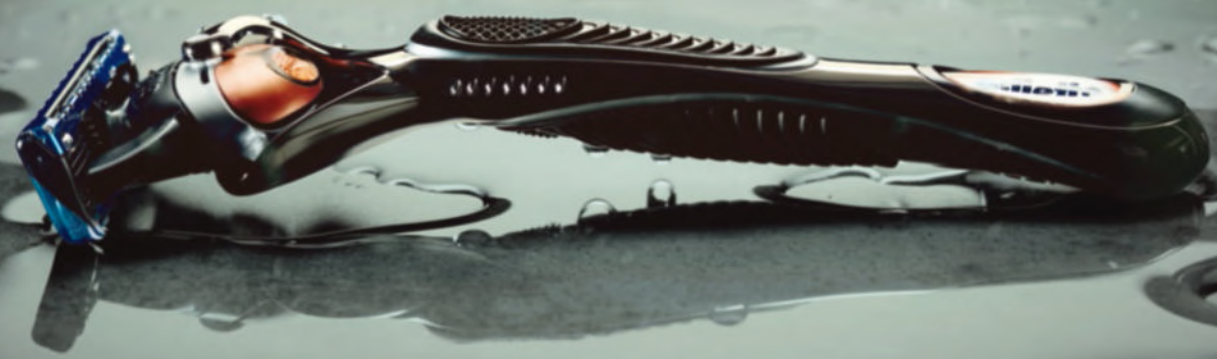
By Daniel D'Addario, Nolan Feeney, Samantha Grossman and Ashley Ross

ELMO, JULIA: MARYBETH NELSON—SESAME WORKSHOP; EMOJIS: APPLE (10); ROCKY HORROR: EVERETT; ICE CREAM: BEN & JERRY'S/NEW BELGIUM; JURASSIC WORLD: UNIVERSAL (2); MYTHBUSTERS: DISCOVERY; CRACKER: SPLASH/HENRY ALDRIDGE & SONS; STAR WARS: LUCASFILM/WALT DISNEY STUDIOS; FRAPPUCCINO: STARBUCKS; GETTY IMAGES (4)

NEVER SAY NO TO ADVENTURES.
ALWAYS SAY YES. OTHERWISE
YOU WILL LEAD A VERY DULL LIFE.

Ian Fleming™

IAN FLEMING,
CREATOR, JAMES BOND NOVELS



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THE AWESOME COLUMN

I invent the holiday you've always missed without knowing you were missing it

By Joel Stein

SOCIAL MEDIA HAS BROUGHT US MANY IMPROVEMENTS, like keeping our spouses in line by letting them know that at any moment we can flirt with every one of our exes. But eternal socializing leads us to be interested only in news that serves as an excuse to talk about ourselves, which is hard with Syria but easy with National Nachos Day. The popularity of ridiculous holidays is growing as people earnestly post selfies while eating caramel popcorn on National Caramel Popcorn Day or lying in the hospital on National Trampoline Day.

The news that people are using the news as an excuse to talk about themselves seemed like a great excuse to talk about myself. To do that more formally and more annually, I decided to try to establish National Magazine Humor Columnist Day, on which people could post stories about how I, and maybe Dan Wuori at the cycling magazine *Velo*—but really just me—affect their lives.

IN 1996 the House of Representatives passed a rule to stop members from spending all their time creating national days, so now they just propose them, skip the vote and declare them anyway. I contacted Jason Chaffetz, who, as the Republican chairman of the House Oversight and Government Reform Committee, is in charge of federal holidays. To my delight, he said he'd help and sent an email detailing his efforts later that same day. "I thought Aug. 5 would be a great day for your organization, but obviously it's already taken," he wrote, attaching a picture of oysters, which is how I found out it was National Oyster Day. A few hours later, he wrote that he was considering the first Friday in June: "We would have done it, but National Doughnut Day was already in place." I was starting to doubt Chaffetz's commitment to this cause.

Luckily, I discovered that as with so much in our increasingly decentralized society, new holidays are created not by the government but by four people who work at a company in North Dakota that transfers VHS home movies to digital files. Three years ago, Zoovio co-owner Marlo Anderson created a National Day Calendar website, which feeds crucial fake-holiday information to *Good Morning America, Fox & Friends, Ellen, Conan* and a lot of local radio shows. Anderson gets more than 50 online applications a day and charges winning applicants $1,500, and another $2,500 plus expenses if they want him to attend official proclamation events, which is something I did not want even if Wuori put up $2,499.

Anderson told me National Magazine Humor Columnist Day had a chance if I broadened it to Humor Day. Unwilling to dilute my vision, I came up with a better way to increase my odds. I asked him if I could serve as a guest judge to decide the fate of proposed holidays. Anderson, who had already talked to me for 30 minutes and clearly had VHS tapes to digitize, agreed. I Skyped into the meeting with Zoovio employees Amy LaVallie, Nick Ressler and Alice Anderson, who is Marlo's wife. Marlo, who had culled the pile to 100 from more than 300, did not serve as a final judge, and Nick had to take some work calls, so a lot of the time I had one-third of the power to declare our nation's fake holidays.

ILLUSTRATION BY MARTIN GEE FOR TIME

I THOUGHT I would be the toughest vote, but Amy and Alice were brutal. I was shocked at how quickly they shot down Bring Your Cat to Work Day. "You have to remember that people actually celebrate these days. They get cappuccinos or fritters," said Amy. "We don't want people bringing cats to work." They also passed on a day celebrating unicorns despite the fact that Amy has a unicorn tattoo. I was both impressed that Amy was able to set aside her personal prejudices and nervous that our national holidays were being decided by someone with a unicorn tattoo.

Oddly, it's much easier to get a week or a month for your cause, since no one really cares about them. We awarded months for all kinds of good causes, such as community bike shops and prosthetics for amputees. But we also created National Grandkid Day, Retina Day and Truck Drivers Day. I made a couple of powerful speeches, pushing through an April 16 holiday for accountants and a National Crazy Cat Lady Day on the day after National Cat Day. By the end of our hard work, we had successfully caused people's VHS tapes to be digitized 90 minutes later than they should have been.

Before I un-Skyped, I asked the other judges what my odds were if I officially submitted National Magazine Humor Columnist Day. "I think it would make the yes pile," said Alice, clearly implying it would make the yes pile. So after my Kickstarter page raises $1,500 because my TIME expense account isn't what it used to be, you can spend every July 23 posting a selfie reading this column. And we will both be content that we've done our national duty to inform society to look at us again. ☐

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Paul Fredrick

Drew Barrymore The actor, producer and entrepreneur discusses her Hollywood childhood, working less and her new book, *Wildflower*

Does getting your start as a child actor make your method different? I can't act for sh-t. I can't fake anything. I'm terrible at it. With a *Charlie's Angels,* that is so hard. In love, you can put on some kind of googly eyes, you can pretend it's someone you're attracted to. You cannot fake friendship chemistry.

What does it take to become one of two female five-time *Saturday Night Live* hosts? I think I still have the record of most—and youngest, at 7! I love my *SNL* records. Did I just act like a 13-year-old boy with the trophy I got in Little League? But I think it's important. Lightening the load for other people is a big deal.

You seem to have made peace with your mother after an estrangement. What did that take? Forty years. It's only recent that it feels as good as it does. It just took a lot of time: getting older, having my own kids, letting go of certain guilt and pain and resentments. We just didn't have a very traditional relationship. Because it's not normal doesn't make us bad people.

You write that you didn't want to call *Wildflower* a memoir. Why? It just sounded heavy. I also really need chapter breaks in my life. I like to read in little vignettes. I wanted it to be stories, not a life story.

Has your taste in books changed? I'm not sitting down with the dense classics. Now I'm like, "Oh, my God, 800 pages." For 25 years, that was such a pleasure for me. Maybe that's motherhood.

You write that you're moving away from acting because you want to be there for your daughters. Does your husband feel the same way about his work? We both are able to work from home a lot. Our dynamics, our jobs—at least my job—have shifted focus a lot, but we do really put our kids first. We are parents even more than husband and wife or worker bees. I got to live my own life for almost 40 years—37 years before my first daughter was born—and that was plenty for me.

Is there any role that would bring you back to the screen? When something feels so passionate you get proprietary over it, that fire ignites inside—but nothing's igniting my fire. I would really like to live a couple different lives in one lifetime. And I'd better hop to it!

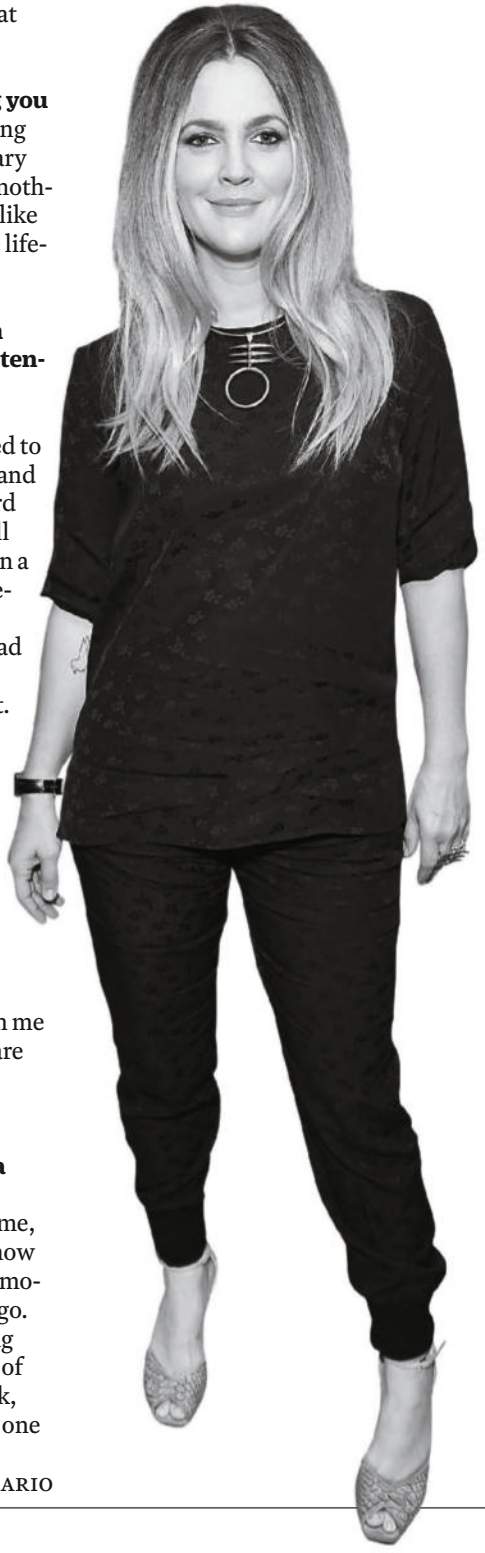
You're choosing to work less at an age when opportunities have the tendency to start drying up. Is Hollywood still sexist? I always felt very lucky. I felt like for 20 years, I wanted to have this company and make films, and someone let us do it. We worked hard and kept our heads down and met all of our responsibilities and didn't don a power suit or pretend we were someone else. So I never had that chip on my shoulder. I always felt like I've had such incredible opportunity and it was up to me to create it and fulfill it.

> 'I can't act for sh-t. I can't fake anything. I'm terrible at it.'

Makeup, eyewear, wine. What does the Drew Barrymore brand stand for? Hopefully something that's well made, most importantly. Something that's very personal from me but not about me. I like things that are joyful and devoid of negativity.

Given that you went to rehab as a teenager, does selling wine send a mixed message? What you experience at 13 is just a moment. Believe me, if I didn't have to have everybody know about it, it would have been a quick moment. It feels like another lifetime ago. I figure I might as well not stop doing things that I love because I'm afraid of what people might think. I just think, Move forward. Don't look back. Put one foot in front of the other.

—DANIEL D'ADDARIO



DAVID M. BENETT—GETTY IMAGES

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